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P R I N C E T O N
R E V I E W.

By Whom, all things; for Whom, all things.

FIFTY-FIFTH YEAR.

JANUARY—JUNE.

NEW YORK

1879.

JANUARY.

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FORCE, LAW, AND DESIGN—A PHILOSOPHICAL STUDY FOR NON-PHILOSOPHICAL READERS.

FORCE, Law, and Design are words which in these days are often in the mouths of men. Sharp discussions, confident assertions, and grave conclusions turn upon the meaning and applications in which they are used. By some, Force and Purpose are held to be natural enemies, each bent on the destruction of the other. If Law attempts to intervene, she runs the risk of being torn in pieces between the two. The questions concerning these terms are not new, though they seem new to us. In the schools of science they are as old or older than Socrates. Does blind force or intelligent purpose rule the universe? Are the laws of the universe self-poised and self-balancing tendencies, that hold one another in accidental equipoise; or are they simply the media by which the forces originated by the Creator's power manifest His thoughts, so that man may understand and obey them? In modern physics, Force and Law are great words, as all instructed men know; deservedly great, as all candid men confess; so great and self-sufficing in the opinion of some as to hold no definite relations to Purpose; while others hold that they indicate no design; others teach that they exclude all thought in nature and all belief in a thinker behind; others, that they are the more radiant with thought, just in proportion as they reveal new facts to the penetrating eye of Science.

In these conflicts and uncertainties of opinion it may not be amiss to look these terms in the face, in order to gain a definite notion of their import and their effect upon our views of nature, of man, and of God. Three questions suggest them-

selves for the present study: (1) What conceptions of Force, Law, and Purpose are held by the man of average intelligence without scientific culture? and, (2) How far the discoveries of modern science modify their opinions? (3) What differences in our views of nature, man, and God are caused by the rejection or recognition of design by science? We begin with the views which are accepted by the unscientific man. Every human being believes that he can *do something*—that by action he can produce some change in the material world. He can strike a tree with a stick, or stamp the earth with his feet, or beat the air with his vocal organs. He can break a rock in pieces or grind it to powder, he can produce heat and flame by rubbing two sticks together. The capacity to effect a change is known as force. We need not ask whether he has a name for the power which he knows he possesses. That he knows he possesses force, is obvious from the fact that he puts it into exercise on any, even the slightest, occasion, that he increases it by exercise, that he defies his antagonist to measure strength with himself, that he even prides himself upon the simple possession of it, without putting it to the proof. We do not ask whether he originally refers power to himself as a spirit or only to his body, or to both as undistinguished in his conscious self-inspection; it is enough that he knows what power is by the consciousness of using it. He also distinguishes the several forms of power, as to run, to hear, to see, to read, to push, to pull, to kindle a fire, etc., to all of which several capacities he would give but a single name, had he the power to gather them under a single generalization.

But he does not limit the possession of force to himself. He believes that other men and animals possess similar capacities. He does not know this directly of them as he does of himself; but he knows it by the effects which both achieve. How he knows this it is not my business here to explain. It is enough that he does know it, and knows it as positively as that he possesses these powers himself. That he believes this of man and animal, no man doubts, nor that he believes this with a positiveness that is stronger than demonstration can impart. We do not undertake to explain the process nor to give the reasons for this assurance, but only to state the fact as beyond dispute.

Man also finds force *in nature*. He sees effects achieved which neither himself, nor any nor all of his fellows, nor all of the animals can produce, how much soever either may desire to reproduce or to avert them. The wind resists his progress, takes away his breath, howls around his cabin, or scatters it in wrath. The great natural agents, water and fire, the earth, and the air, are now his smiling friends, scattering blessings beyond his hopes, or his wrathful foes, surpassing his extremest terrors. We do not ask whether he personifies the force or forces of nature, making each separate part or the whole to be alive, nor, if he does, by what processes he dispels his illusions; we only affirm that he finds force and forces in nature, even after he has ceased to believe every bush and rock and tree to be alive. At what point in his history he reaches this position we need not ask, nor how definitely he holds it; we only assert that at some time he gains and holds an intelligent belief that force or the forces of nature do not directly proceed from a living animal, but belong to insentient matter.

He also begins very soon to learn that these forces produce their effects under *uniform conditions*. Friction however long continued does not set a stick on fire unless the wood is dry. The wind does not impel a boat unless the sail is firmly held at an angle which varies with its force and direction, and unless the boat is headed in a certain direction by the oar. The missile does not strike the mark, unless its aim is changed with the force of the wind and the distance of the mark. The untamed child, full of untried and untaught strength, goes forth to subdue the universe, and expects that it will bend and yield to his will. But it finds the universe ready to give back blow for blow. The harder the child pushes, the more stiffly does the universe push back. The first lesson that it learns is that it cannot effect all that it desires to do, that there is force in other beings like himself; the next, that nature is strong as well as himself; and the next, that in order to accomplish anything he must use his own force in certain relations to the forces with which he contends; in other words, that he must stoop if he would conquer, and must study the conditions under which and under which alone nature will grant him any favor.

The infant is not long in learning that nature acts according

to laws. He does not cry after the moon a very long while. He does not beat his fist in anger against the door that stands in his way, more than a few times. He learns how it can be opened. He looks into the face of this universe that confronts him with its battery of forces, and as fast as he finds out the conditions and ways after which each will act, he acts accordingly. The wild man does the same : he subdues the earth, the air, and the sea, just as he entraps the beast, and tames the dog, and breaks the horse, and subjects the elephant, by learning how each will act, and acting himself accordingly ; either with or against. Just as soon and just so far as man believes that any force in nature is uniform in its actings, just so soon and just so far does he understand that force produces effects under varying conditions.

Last of all, the common man believes *there is purpose in nature*. The forces which he finds in himself are capacities to produce effects. These effects are objects of desire or dread. As he would gain or avoid them he regulates his own actions by what he knows of the unchanging laws which he has learned are the conditions of success. Just as often as he acts thus intelligently he acts for a purpose. So far as he is rational, is he controlled by some design. Force controlled by law always supposes some end. When it is thus employed and the design is worthy, the cycle of all the relations by which man knows and acts is complete, and his whole being is filled with light and joy. If this is true of himself it must be true of the universe of force and law without himself. He cannot doubt that the living beings who are like himself must be impelled by design so far as they are rational.

But how is it with the universe that is not living—the universe of earth and sky, of forest and sea, of mountain and abyss, of sunshine and storm, of lightning and earthquake, of the jocund dawn and the pensive evening, of fruitful showers and starving drought, of healthful breezes and the blasts of death ? How does this universe open to the wild man or the unscientific man so soon as he ceases to believe it to be a living monster, or half living, half dead ; so soon, in short, as he regards it as an aggregate of insensate force or forces ?—especially if he finds law in it, which regulates the operation of these forces and holds them to orderly and certain results. We do not inquire whether

he asks was it created by another or does it exist of itself. We do not care whether he believes there were one or ten or ten thousand spirits engaged in the making of it, or whether it was not made at all. We ask simply whether he believes that purpose or design controls in the action of its forces so far as they are seen to be regulated in uniform methods to uniform results. No sooner does he ask the question, Is there thought and intention here? than he replies at once, Of course there is. He is but a fool who thinks otherwise; who, knowing that so far he himself is rational he controls forces by their laws, does not also believe that the steady and, so to speak, the regulated and controlled actings of nature manifest intention and design. Whether this is or is not the way in which unscientific men ought to conclude, there can be no question that they do interpret nature after this fashion, and cannot easily be persuaded to the contrary. We may not be able to explain how men in common life reach this conviction, but we cannot doubt that they do. We cannot trace the working of the mind of the infant, that finds in the face of its mother the thoughts and feelings that flit across her features, that beam from her eye and leap from her lips. We may not be able to understand how the first slender thread is swung from mind to mind and heart to heart, when man meets his fellow, nor how these many threads are united into strand after strand, till, almost sooner than we can tell it, a strong cable binds the two, and then another, and soon a sure and steady bridge is fixed along which thoughts come and go, almost without the intervention of words. In like manner we may not be able to untwist the subtle threads of that logic, if logic it be, by which the material world is known by the spirit to exist, with its relations to space, and yet to be diverse from the spirit, and to be endued with powers whose energy it measures and whose designs it divines; but the fact cannot be shaken that the man of common-sense holds these beliefs in respect to the fellow-men with whom he has to do, and in respect to the nature whom he seeks to interpret in order that he may control and obey her. Deny to man the capacity for interpreting the thoughts of his fellow-men, and you make him a hermit and an imbecile. Society, with its language and the arts, with its civilization and its amenities, becomes impossible.

In like manner if you deny to him the power to find law and purpose in nature, his power to understand nature and to use nature is at once shut off. But enough of the man of common-sense and common life. No one can doubt that he believes in force and law and purpose in the senses explained. All his language speaks it, all his actions manifest it, all his movements are controlled and interpreted by this three-fold faith.

We pass to our second inquiry : we ask how far the discoveries and lessons of science modify this natural and necessary faith? And first, in respect to force, does science teach us any less or very much more than we know already. Does the scientist abandon, or outgrow or overgrow, the views of force in nature which the common man accepts as that something by which agents produce changes and effects, and to which these changes are ascribed as their cause and explanation?

We say in reply : *First*. Science at first multiplies the forces of nature. We mean what are taken to be separate forces, and have been previously unknown. Gravitation is discovered by Newton as a force never before recognized, whether far or near. Electricity is established by Franklin. The galvanic agency is revealed by its great discoverer. New chemical agents are brought out from their hiding-places, and for the first time show their hitherto unsuspected capacities, that anon cause their discoverer to dance with delight over the new agent which for the first time plays some magic trick, or prostrates him upon the earth by an unlooked-for explosion. The number of separate chemical elements, each with its peculiar effects, is set down for the time being as sixty or more. There are mechanical forces of masses and molecules, modified in gases and liquids ; the chemical agencies already spoken of ; the crystalline ; the vital forces so conceived in plants and animals, involving origination from something living, nourishment from prepared material ; growth after a plan, irritability, and in animals sentiency and intelligence—which are complemented by the forces of the human soul, the intellectual, sensitive, and voluntary, involving the moral. Thus does science proceed, recognizing differences before unnoticed in the various effects in

matter and mind, and ascribing to each of these effects its producing cause, till it has marshalled about itself and learned to recognize the several forces which we have rather roughly enumerated.

Second. The next effort of science is to unite these forces by finding likenesses in their modes of action, or by transforming them into one another. Science very early recognized as a test of the sameness of a force, that it should produce its effects under common conditions, or so-called laws. Thus Newton would not for years accept his own theory of gravitation until he had proved that this so-called force in the distant planets acted with a varying energy, just as a supposed similar agency was known to act upon bodies near the earth. It was an immense step in chemical discovery to be assured that chemical agents enter into composition only in definite proportions. Another important advance was made when it was discovered that chemical elements, however closely united, could be separated by the galvanic agency. This warranted the conclusion that the force that held them together was a special method of the acting of this newly discovered force. It was not long before the force called galvanic was seen also to manifest the phenomena of electricity proper, then those of magnetism, then those of heat, then those of light, then those of mechanical force, and all these were found to be interchangeable. Nor was it very long before all these so-called forces were accepted as modes of motion, now breaking out in velocity and momentum, and then disguising themselves in the unceasing but unseen play and counterplay of molecular vibrations. This was the beginning of the new doctrine of the correlation or transformation of force, according to which the forces in question were held to be only different names for different manifestations of the same agency, and that as molecules in motion each could be made to appear as the other, backwards and forwards, and the quantum and intensity of either could be measured by the mechanical work which each could do. This discovery was very generally accepted. Up to this time scientific men had been inclined to find many forces in nature; grouping them together in classes by common relationships. Henceforward the protean agent that appeared and reappeared

in these several so-called forces was regarded as single and supreme, whose nature was declared to be unknown, but whose presence was marked by relations of motion in space. Every one of these groups of phenomena was henceforth explained as a mode of motion. We do not criticise the logic by which this significant conclusion was reached. We only record the fact.

The transformation of mechanical force prepared the way for the doctrine of the possible transformation of the species of plants and animals. Hitherto it had been held that some hidden agency dwelt in every individual living being, whether plant or animal, which kept it true to its kind, with some room for variation indeed, but with a prevailing tendency to return to the original type. Science begins to conjecture, and learns soon to declare that there are no fixed species, and no force to hold their progeny to their kinds; that the law of living beings is a law of change and progress, from the simpler to the complex; and that all the present species now living are the products of agencies that for uncounted generations had been developing higher and nobler forms of life from the lower and less perfect. Some were so bold as to assert that the lowest forms of life had in fact been developed from the inorganic. Two difficulties stood in the way of the acceptance of this extreme doctrine. The first was that no experiment could be brought to prove it decisively and satisfactorily. And yet both Mr. Huxley and Mr. Tyndall are strongly inclined to anticipate it as certain to be established. Mr. Huxley says that the scientist is no reasoner who does not accept it as a theory. Mr. Tyndall says it is a magnificent generalization, too splendid not to captivate the scientific imagination. Mr. Huxley and Mr. Tyndall both say that every experiment which professes to have developed living out of dead matter, has been a palpable failure. The second difficulty is, that no laws that are worthy of the demands of science have been discovered for the forces that conspire in the development of the living from the non-living, or from lower to higher forms, much less in the great transitions which the theory assumes. As applied to living species, however, development has been accepted by very many naturalists on grounds of what are called decisive analogies, derived from observation of plants and animals that are

now living, and the fossil relics of the generations that are dead. The force or forces, however, that have acted in this wonderful story of progress have a very low scientific value, whether estimated by a mathematical standard, or any scientific formula. The first of these forces is a tendency to vary, such as every man has been aware of who has raised a seedling from a grape or an apple, or every boy who has bred from a pair of pigeons; but this tendency cannot be definitely formulated. The second is the reaction of environment to confirm a variation that is gained, whether air or soil or food, in hostile or favoring conjunction; but this is equally indeterminable, and in its very nature incapable of being formulated. The forces and laws are only indefinite generalizations, founded on vague or imagined analogies between the working of every kind of force with every other, and their relations to heat, light, and kindred agents, or their supposed dependence upon particles of matter in varying forms and movements. Inasmuch as these agents are supposed to depend on differing modes of motion or on different molecular textures, it is inferred that every agency concerned in the development of the living from the living, and the living from the dead, must depend upon some change in the arrangement or motion of molecules. Hence it is concluded that all the wonderful functions and processes of living beings, including their capacity for development, are brought about by mechanical changes in the matter of which they consist. By logic of this sort all the forces which we call vital, in all their varieties of function and of form, of nutriment and growth, of alleged development and of future progress, are reduced by a single generalization to some supposed mode of motion or some adjustment of material particles.

Having established evolution in the production of every thing living, it is not difficult to affirm it of the formation and masses, and the structure and the motions of the cosmical bodies. A beginning is of necessity assumed of particles of star-dust in a certain condition of motion and with a certain environment. This being given, every thing else follows—the massing of the earth in all its phases, its revolutions, the formation of clouds, the generation of light and heat, the consolidation of the melting rocks, the melting and cooling and transformations of the same, the sep-

aration of land and water, the generation of plants and animals, etc., etc.—in the way already described. Man himself, and all that pertains to him, his form and structure, his organs and their functions, his brain and his mind, his heart and his will, his character, his civilization, his history, his institutions, his morals and his manners, his aims and his destiny, are all the product of certain particles that originally found themselves in motion, from a rarer to a dense medium.

These extreme views are far from being accepted by the majority of scientific men. Very many of the most eminent reject them as romantic dreams. They are the extremest doctrines which could possibly be reached by science in its reach after unity, *i.e.*, in its effort to resolve into a single force the many which science at first seemed to discover. It falls not within my purpose to examine the truth of these views. I have simply to ask what new light, so far as they are true, do they cast upon the scientific conception of force? In other words, what change is made by science in the views of force which are held by the man of common-sense? So far as I can see, it makes no change at all. Conceding that all phenomena are to be referred to changes in the particles of matter, and that these changes have succeeded one another in a progressive order from the simple to the complex, then all the forces of the universe are resolved into the capacity of these atoms to move in certain directions and at certain rates. I need not say that the capacity of matter for motion is the first form in which force is known to the child, and continues to be known to the man. So far as science explains phenomena by this single force, it employs a conception which is thoroughly familiar to the common man. Men of science are ready to confess that they cannot define force, and are nearly agreed that after searching the universe to master its secret, by sense imagination, and reasoning, they are forced to come back to the simple conceptions with which they set off when they crossed the threshold of science.

Leaving force, we proceed *to law*. We have seen that the child and the savage have a correct notion of law, so far as they have occasion to apply it. They believe that effects may be produced by combining the agencies of nature after a cer-

tain fashion. The boy flies a kite and sails a boat by uniting two forces. The man applies a lever by a similar process. As we learn new forces we invent new methods of combining them, in order to reach definite effects ; when unusual effects or phenomena occur we endeavor to explain them by supposing a combination of forces which we have never observed. By and by we learn to measure by number the energy of the forces which we employ, and then the directions in which they are applied, and the spheres to which they extend. In other words, we begin to express the laws of force in mathematical relations. Herein lies the secret of the progress of modern science, that it estimates and defines the conditions of phenomena in terms of number and magnitude. To this, astronomy owes all its precision and nearly all its discoveries. Mechanics and gunnery, hydrostatics and engineering, chemistry and molecular physics, all depend on the magic of algebra and geometry. Their abstract relations make the conditions absolutely definite and precise. The application of mathematical tests has established whatever truth there is in the doctrine of the correlation of forces and given plausibility to the hypothesis that all the qualities of matter, whether organic or inorganic, whether chemical or vital, are owing to the different rates and directions in which the ultimate atoms move. Let one example suffice. The ultimate molecule of oxygen has its well-known sensible properties, and its different capabilities when united with the other elements or bases with which it is known to unite in different proportions. Let it only be admitted for a moment that all these various capacities of combustion, detonation, acidification, corrosion, etc., are owing to the number of ultimate atoms of which the ultimate molecule is composed, to the rapidity of the tension or the vibration of each, or it may be to their gyrations or revolutions ; let it also be supposed that all these are capable of being expressed in mathematical symbols, and you have an example of what many believe to be the ultimate explanation of all the cosmical phenomena. That this is the farthest possible from being proved as yet of the forces that are assumed by the evolutionist even of the most moderate school, has already been explained. So much for the conception of law, which is rightly conceived as the distinctive characteristic of modern

science. Law is not a force, but it supposes a force already existing. It expresses a regular mode in which a force acts in producing an effect, either alone or with other forces. Inasmuch as no effect in nature is produced by a single force acting alone, but is always the result of the joint action of several, the known action of one force is often spoken of as conditioning the other. In this way it happens that a law of nature is often conceived of as though it were a force in nature, because forsooth the presence of the second force, or the particular manner or direction of the action of the first, is a condition of a definite result. These conditions are believed to be fixed. It is only as fixed that they are called laws, only as unchanging that they are said to regulate the processes of nature and the actions of men with respect to them. All science assumes that these laws are unchangeable and trustworthy. For all these reasons, it is not surprising that by many the laws of nature have been conceived as separate and independent agents, not laws given or imposed upon force, but law-givers and law-makers of themselves, independent and irresponsible forces, owing allegiance to nothing higher, and exacting allegiance from every other thing and being. So much has science learned concerning law in nature.

What more does she teach than the common man, than the common boy, has already recognized? We answer, nothing new in kind. The boy who flies a kite knows that the force which he employs to lift his kite will only help him on certain conditions; the savage who uses a bow or a rifle knows that when the wind is high he must aim in accordance with the force that would blow his missile aside. The boy and the hunter believe these conditions to be uniform and fixed. The accomplished scientist enlarges the rude formulæ of each into intricate propositions concerning the composition of forces, which he applies not only to projectiles, but to pressure and resistance, to the tension of solids and liquids and gases. The only difference between the two is that where the boy and hunter knows one law he knows a thousand; where the former can only rudely apply their rules to a few cases in their own practice, the scientist formulates them in mathematical expressions and applies them in a myriad of cases; whereas the knowledge

of the one terminates with themselves or some rude traditions which they hand on to the next generation, science in some sense gives the next generation the advantage of starting at the goal which the preceding had already reached. But as to the nature of law and its relations to force, there is no considerable difference between the unscientific and the scientific man ; the one understands both as completely as the other. Perhaps the scientific man, for the reasons already given, is of the two more likely to misconceive law, and to esteem it an independent and self-acting force, to personify it as a demigod, half intelligent and half impersonal, or deify an hypostasized abstraction.

We come last to the belief in *purpose or design in nature*, and ask what changes in our notions of it or our confidence in it are wrought by science. Let us recall to mind the truth that the unscientific man assumes that every thing which is done in nature is done for a purpose. He does not learn this from experience, but he requires this belief in order to learn any thing from nature. It is with his belief in purpose, as it is with his belief in force and law. He does not weigh the evidence for and against, and at last decide that the evidence preponderates in favor of both ; but he opens his eye and mind, and inquires what force or forces produced them, and under what laws or conditions these forces acted to this result. Similarly he inquires for what end do they take place. He may not be able to answer any of these three questions in respect to many events or phenomena, but nevertheless he is compelled to ask them all by his belief that an answer to them all is reasonable. This is the position of the unscientific men in respect to purpose. We inquire next, Does science teach man to take another position, and if so, what is it ? Are the facts of science or the discipline of science fitted to lead the student of nature to believe more or less firmly that nature is controlled by design ? This is the one question for which this study was undertaken. What is our answer ?

In reply, we notice first of all that, if modern science by its own confession has learned nothing and can teach us nothing in respect to the nature of force, it has divided and subdivided the points from which every form of force proceeds to an extent that severely taxes our faith, if not our credulity. The molecules

that are packed into a cubic inch of any species of matter are now counted by the million, and the atoms into which each is subdivided are counted by we know not how many more; and these atoms, if we adopt one theory, are capable of manifold motions. Upon these motions, if we believe one theory, the special qualities of the molecules depend; if we accept another each molecule or atom is endued with a capacity of its own to act in accordance or antagonism with manifold others, having the aspect, to use Clerk-Maxwell's phrase, borrowed from Sir John Herschel, of being manufactured articles. Of course if this is true every one was manufactured with some definite design. Let this mass of matter be heated, every one of this myriad of particles is set in motion in a peculiar way, pressing against one another so as to expand the bulk of the mass, and with such irresistible energy as to set in motion the particles of all the bodies near itself. If it is a cubic inch of water they are separated into steam, or if some unstable chemical compound, the mass is at once decomposed into its constituent elements. If it is transparent, its particles are interpenetrated by an undulating ether, whose undulations are variously affected by its substance giving to the eye that is near all the refracted colors, or moving onward for miles they excite another eye that is waiting to respond. How many countless actions and interactions between these moving particles or points of force within so narrow a space? So far as we can see, every particle meets with a response in every other after a definite manner and a uniform law, the same here as there, the same now as then; whether the here is in this apartment, and the there is in the remotest fixed star, or in the earth's unvisited centre; whether the now is at this instant, or was in that morning when the stars sang together in their first harmonious note, when all these conspiring atoms greeted one another as friends. If we think of the energy of these agents, as well as their variety and number, our convictions are deepened that they were designed for one another—that is, were fitted to act upon and with one another in definite methods and to definite results. A cartridge of dynamite makes us shudder to look at it. Our terror is allayed by the thought that its power to do mischief is limited to the presence of one or two conditions, and that these con-

ditions of its exploding will never change. Had we no belief that every agent was thus fitted to every other, we could not but tremble at any possible catastrophe which the seemingly most harmless object might occasion. Modern science has by its discoveries multiplied the suggestions of possible disorder a million-fold by the insight she has afforded into the constitution of the earth and the air and water, and their relations to light and heat. She calms our terrors effectually by confirming our confidence in the fixedness of law. But she best establishes our faith in law by assuring us that every agent and every force was designed to act with every other for some rational end. Some of us at evening have encountered a knot of midges moving hither and thither in a compact and yet severed mass, winding backward and forward along their mazy paths, as though they were weaving a many-threaded tissue, never jostling, though seeming ever just about to strike, keeping their form as a whole, which proceeds as though directed by a single will, and yet is all alive with individual activity. This is a feeble picture of what science teaches is going on in the most solid masses of matter as they are quietly transformed by manifold workings within. It is utterly inadequate to set forth the currents and counter-currents that make up the palpitating life of a growing tree, that weaves the texture of stem and bark, of bud and flower, that compounds by subtle selection and re-composition the nourishing fluids from the earth and lifts them up along the lofty channels, to elaborate them in the leaf, by subtle exchanges in the air, and then to compact them at last in the new year's growth. Our illustration would be a mockery of the changes in the animal economy, as they appear in the glorious universe of sentient beings. Yet science has soberly taught us to regard the cosmical system itself from the largest masses to the tiniest molecules as a vast aggregation of atoms, each held in place and form by acting with and counter-acting one another. Let certain of these forces cease to act in the same proportions as now, and the earth itself would fly into tiny fragments as suddenly as one of Rupert's drops, and the words of Shakespeare would be literally fulfilled, as the great globe itself, and all which it inherits, would leave not a rack behind. The tiniest flower that hangs by a thread over a

rushing stream is not kept in its place more truly by that thread, than the thread and the crumbling verge on which it hangs are held in place by forces which come from the sun and Jupiter and Saturn. Some of us may have stood on the old tower that once overlooked the principal cascade of the falls at Niagara. If so, we shall remember that the spectator looks directly upon the stream as it sweeps over the unseen verge many fathoms deep, smooth on the surface, forever shattered and yet the same forever. As one looks beneath this treacherous surface, he sees the masses of foam in moving pillars rising perpetually and constantly broken, ever newly-created, ever dashed into myriads of glittering and many-colored drops, giving to the eye and the mind at first a vivid impression of chaos itself. But there is no chaos there. Substantially the same forces are repeated for ages, the same colors are maintained, the same pillars stand, though always falling, except as there are slight variations in the quantity of water, the forces of wind, the light of the sun, with now and then a breach in the rock beneath. We have in this scene an image of the universe as known to science. The matter is fluid, the forces might change, their laws only are unchanged, because these are adjusted by purpose that has adapted the one to the other. The unstable yet permanent cataract is an apt image of the universe as modern science beholds it, made up as it is of motions and commotions that are so subtle, so noiseless, so manifold, so tremendous, and yet so nicely adjusted and so peaceful, that nothing seems so stable.

Let us return to our image again. I said that now and then a break in the rock beneath, changes the form and inner movements of the cataract, and we know that the cataract itself has notched the records of the ages of its retrocession upon the rocks by its side. So the universe, as science teaches us, is not stationary in its forms. It has passed through varied phases, each of which has been developed largely from the preceding under unchanging laws. Whether a creative force may now and then have intervened, or is ever fulfilling its behests by a plastic energy, we do not here care to inquire. We have to do only with the forces which all believe to be fixed in their actings and laws. If purpose, as we have seen, is re-

quired if we would explain the harmonious action of the forces that act in any present phase of the universe, purpose is also required for the more numerous and complicated adjustments which are involved in the development of one phase from another. If the adaptations are many which hold the elements of a growing tree or a living body together, those are far more numerous which are involved in the changes in form and structure and function which follow one another in regular procession, for a century of life. But what is a century of the life of a tree to a thousand centuries of one of the fermenting geologic periods, with its meltings and its freezings, its upheavals and depressions. But in each, every particle of matter has had some share in the enormous mechanical and chemical changes, by heat and cold, by water and fire, that have prepared the earth for life; each phase in its order, the simpler before the more complex, till the structure was complete. If we suppose a controlling design to be present, and that the law of progress marshals, impels, and guides every mass and atom in this procession towards a completed plan, then development is explained as possible. Mr. Huxley says, and he says truly, that it is a fundamental proposition of evolution "that the whole world, living and not living, is the result of the mutual interaction, according to definite laws, of the forces possessed by the molecules of which the primitive nebulousity of this universe was composed. If this be true, it is no less certain that the existing world lay potentially as the cosmic vapor; and that a sufficient intelligence of the properties of that vapor could have predicted, say, the state of the fauna of Britain in 1869, with as much certainty as one can say what will happen to the breath on a cold winter's day."—*Critiques*, etc., p. 305. This is very true. Now let us suppose that a master in science had selected for his study that portion of nebulous matter which was to constitute the brain of the most sagacious dog in 1869. We had almost said the brain of Mr. Huxley himself, as Shakespeare makes Hamlet trace the noble dust of Alexander till he finds it stopping a bung-hole. If he knows the definite laws of this nebulous mass so thoroughly as to see it in Mr. Huxley's future brain, he must know what it can be and do with refer-

ence to all the other particles with which it will need to act, and follow its future activities through all the phases which it will assume till it emerges into an intelligent brain and begins to think. The man who could predict this orderly progress from what he sees in these particles of nebulous matter, we should say, sees in them the *plan of their development*. That a plan is involved in the very constitution of these particles, which is understood only as these progressive possibilities are discerned. If the particles were to be created with this constitution and surrounded by their fellows by a being who had anticipated in his mind their history, we should say at once that design controlled their existence and the developed activities that were to follow. If law regulates the result of the combined activity of two forces or two millions of agents in present harmony, and if law would seem to indicate thought and reason, how much more does the orderly development of such forces manifest design when long periods of time are required! This suggests the remark that if we accept what is called a tendency to variation, of which Mr. Darwin makes so much, or the tendency to differentiation, on which Mr. Spencer insists, and use either to account for the evolution in which all scientists believe, then we must suppose each to act under the steadying direction of design for unnumbered generations, or the result would be indefinite vacillation. If, for example, a collection of nebulous vapor should start on the road of transformation which it must travel for some millions of years till it lands in the brain of Mr. Huxley, full panoplied for a sturdy fight with every dissentient, it not only has a long road to travel, but it is a road which must steadily tend toward this single goal under the influence of all the attractions and repulsions that it encounters on the way. If the particles concerned are at the start shunted off by an impulse which they can continue to sustain, all is right; but unless this destination is assigned, and every arrangement is made to hold them to it, it is a mere chance whether any regular tendency can be maintained. There will be serious hazard of fatal disturbance and confusion. If we resort to the survival of the fittest, we find the same difficulty in supposing that the crowding atoms that line this hyperbolic pathway will push for billions of ages with such

an even pressure as not now and then to trample down even the fittest, or push them off to another track. But enough of evolution and progress, in regard to which scientific men are not all agreed. It is time that we had returned to the beaten highway of methods and truths which are accepted by all.

Science requires exact definitions, or a precise and complete enumeration of the properties that separate one class of objects from another. As in common life so in science, the most satisfactory definition states what any thing exists for in relation to other objects, or, as we say, assigns its place or function with its neighbors in a rational system. Let three straight lines be drawn separately from given points. Apart from one another they are three straight lines only. But as soon as they are seen together in their several relations to one another, as parts of the triangle which they constitute, they are defined by the triangle for which they are drawn, and which by being drawn they create. A hundred sticks of timber lie confusedly in a heap. Each may be defined as sill, or joist, or rafter, according to the use for which it is designed or best fitted in construction, as the frame of a house, or bridge, or stable. Every object which we define we define best by its function, and one or another function or relation is selected as best according to the place which we give it in the system of things or the purpose to which it is to be applied.

We classify on the supposition that certain groups out of the tens of thousands which we might make are significant, and are likely to be permanent in the designs of nature ; and that the characteristics which we select are permanent in these permanent groups, and will help us in learning of other capacities and adaptations. In other words, we suppose that certain groupings of nature, certain qualities by which we collect and marshal them, are of greater significance in the designs of nature in respect to science or practical life when we gain a step beyond the classification and naming which other people do for us, and begin to theorize and invent and discover for ourselves. In other words, when we look below the surface of things, the language by which we describe our processes seems to take for granted that design is what we are searching after. We inquire, as we say, into the meaning of things, their true

intent, import, and significance ; the ideas and secrets of the universe, etc. Every artisan, experimenter, and inventor, every florist, pigeon or dog fancier, every stock-breeder, as truly as every discoverer of great laws or truths, tries first to guess, and then essays to confirm what this or that sign imports. All the poetic and idealized representations, all the mythological conceptions concerning the favored child of nature, her consecrated priest, her chosen devotee, proceed on the single assumption that nature itself is controlled by design in her own processes and in her modes of making them known.

We have already seen that the belief in the laws of nature, in regularity of their action, or the mutual and steady adjustment of one force to another, is but another form of assenting to the truth that design and thought are supreme. The circumstance that scientific men often stop short with these laws, without asking themselves with what the belief in law implies, proves nothing except that they are so occupied with this or that special line of investigation or inquiry as to leave little leisure, or occasion to inquire whether a purpose underlies law. The exclusiveness of their occupations, with the very concentration of their inquiries within these limits, and the current religious belief which connects nature's laws with the Supreme Being whom they worship, render superfluous any speculative thought upon the import or designs of nature. Now and then it happens that a very able and truth-loving student forgets, in the fervor of his faith in law, that any inquiry in respect to the grounds of this faith is required or admits of a rational answer. Others confound laws with forces, and personify the confused conceptions of both, and assume a position of contemptuous defiance towards any thinker who asks them to give a reason for their faith in these abstractions. Notwithstanding all this, the fact remains true that modern science has myriads of more occasions to believe that nature is palpitating with thought than had ancient or modern common-sense or ancient science. Although it not infrequently happens that the objects of inquiry are so many, yet the phenomena are so engrossing, and the questionings and explorations so fascinating, that the grand impression of the universe as a whole fails to be responded to.

We observe, in conclusion, that the truth that design con-

trols the universe alone furnishes science with a satisfactory conception of *nature*, of *man*, and of *God*.

By nature we mean the material part of the universe. Here we are met again, notwithstanding all that has been reasoned on the subject, with the obstinate questioning, how can dead matter express objective thought? Is the answer retorted, Does not animated matter at least express not thought only, but feeling as well? Do you doubt the existence of the spirit of your friend, or the thought which flashes out from within the recess that has never been penetrated except by himself, and writes itself upon the face that incloses and veils it? To this the reply will be ready, that if we allow that animated matter can reveal the thought which it expresses by word or look, it does not follow that matter of another sort can reveal design, much less that it can manifest feeling. We answer it can, because it does, and in cases which all men feel and no one will dispute. Take any one of the automatic machines with which we are now so familiar—the very common card teeth-setting machine. Notice how the wire is first reeled off and shortened as fast as it is required, then cut at the requisite length, then seized by the iron nippers that are thrust forward at the moment, then drawn back at the instant and looped, then bent to the suitable length; the end sharpened, then confronted with the leather flap, which has been pricked in advance by a special apparatus worked by the machine, then thrust in, and meanwhile as the leather slips forward other holes have been provided, and the process already described has been perfected with another looped tooth, which is at once sent home to its place. When a single row has been completed the flap is slipped upward so as to carry the finished row of teeth out of the way, then it slides backward and is ready to meet the repetition of the successive processes which have preceded in orderly succession. Is not thought made visible here? Do not indications of design flash from every movement so vividly and impressively, that we almost think or say the machine is insouled? Is it said that this is because we have seen the construction of similar machines, and that any work known to be of man, or contrived by the mind of man, may naturally be interpreted through another like itself? To meet this difficulty we select

another example—Faber's talking machine, which was copied after an apparatus never made by human hands or devised by human thinking, of larynx, with pipe and reeds, with pharynx and roof of mouth for resonance, with tongue for pressure against palate and teeth, capable of regulation by the lips for finishing and modulation of sound, and yet controlled by a few keys that regulate the actings of larynx, tongue, and lips upon the air that is furnished from a common kitchen bellows. We almost start with surprise when, as the attendant touches the keys and plies the bellows, the machine utters so distinctly, *I can speak English. Sprechen sie Deutsch? Parlez-vous Français? Constantinople, Mesopotamia.* But this you say was imitated from an apparatus already in existence. But what was copied in that apparatus?—the parts of it? Not alone the parts as such, in shape and quality of material, but the parts as adjusted to one another in the production of articulated sound, seemingly with the design of producing spoken language, that is, the thought in it. But if so then the design must have existed, and been made manifest through the structure itself. Is it said that design is thought into the natural talking apparatus, by analogies from manufactured whistles and reeds, etc. This is sometimes said, and it is charged as unscientific that man's reason in adjusting means to ends, under the limitations of his materials, is made the norm and measure of an imagined thinking in nature. This and nothing else is the meaning of the current charge of anthropomorphism made now so freely, as though nature were belittled and dishonored by having her thoughts interpreted by the analogies furnished from human processes. We reply science is and must be anthropomorphic so far at least, that man must exalt the authority and the trustworthiness of his own intellect if science is to stand. If the interpretation of design in nature is anthropomorphic, then the discovery of that geometry in the heavens by which every eclipse is foretold, and the Nautical Almanac is completed, is also anthropomorphic.

This leads me to add that design in nature alone assigns to *man his true place in nature.* If I am asked what I mean by man's true place, and am told that I beg the question by assuming that man has any place (*i.e.* any destined or designed

place), I answer: I mean by man's true place in nature, that place on the one hand which science must assume for the intellect of man, in order that science herself can maintain any consistency or assert any authority, and the place on the other which the morals and manner, the laws and institutions of man must assert for his hopes, his obligations, and his rights. These are strikingly contrasted with the place and authority which are allotted to man's intellect on the supposition that man is the temporary product of material force, and with the dignity and destiny which are accorded to man's desires and hopes, on the theory that he exists for a few years to be dissolved into his original elements, and to reappear in other forms of being and action. If science has any authority, the intellect of man must in a sense assume to judge the operations of nature, and interpret them by its own. It finds that its own operations are controlled by design so far as they are rational at all, and it cannot but believe that the same is true of the regulated operations which nature presents for its interpretation. In doing this the intelligence of man assumes permanent authority to judge of the past and the future by relations and rules that are supreme and abide forever. Science in a sense must assume for man *kingship over nature and thereby kindred with God*.

If we take the other view, viz., that man being the product of nature is just what nature makes him by the temporary development of her progressive agencies, this and nothing more in his intellectual powers, and in the relations by which he judges, mathematical, causal, law-interpreting, design-interpreting, then science is dethroned and man is dethroned with her. His relations are only his modes of looking at things as long as he lasts, but there is nothing true in things which corresponds to them; therefore all and both the subjective processes, and their imagined objective counterparts, will disappear at the next turn of the wheel when man is whirled off into something else. But what will become of science if this theory of man is true? If man's view of nature is anthropomorphic, then science is necessarily anthropomorphic. If man assumes too much in finding design in nature, then by the same rule he assumes too much in finding any thing in nature, force or law, nay, even in finding in it number and geometry. To deny *design* in

nature because it is anthropomorphic, requires us to deny *force and law* as well. It should never be forgotten that what we call science is the product of human thinking, and if we do not assert for man and the thinking of man its appropriate authority, then science itself should bow itself off the stage. Science in these days is not very willing to be bowed off the stage, and it ought not to be, and for this reason it ought to assert his place in nature for man as a knowing being ; but this it cannot do, unless it finds design in nature which assigns to man supremacy. Next, if design rules in nature there is also a place in nature for man as an emotional and voluntary being. This is assumed in all our social and political theories, in our ethics and our politics, in our institutions, our laws, in all that we say of human duties and human rights. All these take for granted that man is able to recognize all these relations, and that some of them are supreme over all others, in the estimate of man's position in the intentions of nature. Those who deny design must necessarily regard moral relations as the changing products of social sympathies and antipathies. They must interpret conscience to be the reflex of advanced experience and capricious fashion ; duty, the command of the majority ; right, to be what is conceded by the will of the strongest to the weakest party. Man's destiny is to die and to rot, and that is the end of him. His future life is an impossibility, and his destiny after this life is over is but a phantasm or a dream, except as the thoughts and feelings which he has evolved live on in the impulses that they have imparted to the thoughts and feelings of other beings who follow, for there is and can be no other future life.

This is a short statement of the ethical, sociological, and political creed that is taught by those who find no design in nature, and make every thing which gives man his dignity and self-respect to be the product of social environment plus a more or less considerable variation of individual impulses. I need not argue that such a view destroys conscience and degrades man, that it makes the educated and cultured more selfish and grasping, and the uneducated more discontented and revolutionary. It claims to be very new, with its sounding abstractions and its scientific pretensions. It would be easy to show

that it is as old as Lucretius and Hobbes, and that it is dangerous in proportion to the confidence with which its want of coherence is disguised and its immoral tendencies are hidden, even from its advocates, by its high-sounding language, its rhetorical speciousness, and arrogant dogmatism.

The assumption of design in the universe justifies the faith of science in a *personal and intelligent Creator*. Justifies? I had almost said it requires this in order that the intellect may rest in a completed idea of a well-rounded universe. A creator is a being who originates all the active beings, and imparts all the force or forces which exist, and who regulates their mutual activities by the laws which he has imposed upon them to accomplish the designs which he proposes, in the existence, the development, and activity of the material and spiritual universe. You may try in vain to stop short at any view of the origin of things without designing force, if you hope to provide for science. You may try the theory of force only, as Spencer does, and refer this origin or existence of things as he does to a persistent unknown and unknowable power, unlimited in space and without beginning or end in time. But in this conception you have all the mystery that pertains to a self-existent personal Creator, with no advantages. You have a being who is himself unexplained, and who himself explains nothing. But what next, according to Mr. Spencer? Why, somehow this unknowable power appears as acting through or upon a mass of matter which is in a state of unstable equilibrium, in which there is provided potentially all the events and beings which are to be developed in the future history of the universe. How it happens to be that each particle is in its place, with its wondrous potencies and promises of vegetable and animal life, of heroes and battles and philosophers, of lords and ladies gay, of saints and fiends, is not explained. How each happens regularly and progressively to act, no one can explain.

But all the future is here. Here is destiny, but no design. There is law here, because each particle that stands or moves in this star-dust must act with every other particle according to the capacities of each to condition the other. There must be progress steady and onward we are told, according to a law which sets in motion a set of constantly shifting

and changing partners, every figure being more complicated than the other till the dance is out. Here again is destiny—the destiny of evolution, destination with perpetual progress, but no design.

Take now the other view. Let science recognize purpose, and there is explanation of law. The force of every individual agent is the condition of every other so far as they act in mutual dependence on one another. Admit evolution, even in the extreme form, concede that every thing has been produced out of the original star-dust. Even then we need not ask which best satisfies the demands and the discoveries of science, which is the best working hypothesis—this theory of a personified force, or the theory of an intelligent Creator whose thought preceded the act that called the universe of forces into existence, fixed them under law, in obedience to designs of love that blessed beforehand those beings who were to interpret in science and imitate in art and honor in worship the one knowable God : knowable by them, because made in his image?

But our study has been too much prolonged. We conclude with the words of Lord Bacon : “ It is an assured truth, and a conclusion of experience, that a little or superficial knowledge of philosophy may incline the mind to atheism, but a farther proceeding therein doth bring the mind back again to religion ; for on the entrance of philosophy, when the second causes which are next unto the senses do offer themselves to the mind of man, if it dwell and stay in them, it may induce some oblivion of the highest cause ; but when a man passeth on farther, and seeth the dependence of causes and the works of Providence, then according to the allegory of the poets, he will easily believe that the highest link of nature’s chain must needs be tied to the foot of Jupiter’s chair.”

NOAH PORTER.

CONTINENTAL PAINTING AT PARIS IN 1878.¹

THE most important picture in the whole Exhibition of 1878, if size, abundance of material, great technical power, and a world-wide celebrity are all taken into consideration, was unquestionably Makart's "Entry of Charles V. into Antwerp." There were many works which a private collector would have preferred to this, and many of deeper artistic quality and significance, but there was not one that so predominated by the most striking and obvious kinds of superiority. It was evident at a glance, before the enormous canvas, that the painter was perfectly at home in the showy branch of art which he had adopted. He betrayed none of that timidity and inadequacy which would be very likely to seize upon an artist of finer and more delicate taste, in presence of such a dangerous undertaking, and the result clearly proved that his self-confidence was that of real power, and not the illusion of conceit.

The subject of the picture was suggested by a passage in the diary of Albert Dürer when on his travels. Being at Antwerp at the time when Charles V. made his public entry into the city, Dürer took note of the splendid spectacle, and more particularly of one detail which shocks our modern taste and is certainly much more Greek than Christian in the sentiment which inspired it. In those days on great occasions of triumphal progresses, it was thought the correct thing to exhibit all that was most beautiful in the city, and as nothing is more beautiful than a young and beautiful woman, the worthy burghers actually carried their principles so far as to exhibit handsome

¹ The French and Italian schools of art were discussed by the writer in the March number of this Review. The present article takes up, in order, the Austrian, German, Belgian, and other sections of Continental painting.

young damsels of the most respectable families, in a state as near to nudity as possible. Such is the power of a custom, that the young ladies were happy and proud to be chosen for these occasions, and instead of being disgraced by this public exhibition, they were raised by it in general esteem, and it increased their chances of making a good marriage. Dürer talked of this afterwards with Melancthon, and said frankly that he had observed these young women, whose forms were admirable, "very attentively and closely, and without shame, because he was a painter;" but Charles V. "cast down his eyes as he passed the fair ones, which, it is said, offended them mightily." I rather apprehend that there is an error, either intentional or involuntary, in Makart's interpretation of the scene. He makes the damsels actually take part in the procession, walking before the king's horse, whereas Dürer's reference to them seems rather to imply that they were to be seen at some point of the route. Makart's arrangement of his subject is rich and magnificent in the extreme, and it is really a fine subject for painting, but (setting aside all our modern notions of decency) there is something uncomfortable in the idea of young ladies walking with naked feet along a paved street close to the hoofs of war-horses, and it offends one's notions of politeness to see gentlemen riding on horseback in rich mantles when ladies are going bare-foot, one of them actually carrying a great long sword—the king's sword, I believe. Again, the painter apparently shares with Rubens a love of disorder for its own sake. The procession is badly marshalled; one of the girls is afraid of being trodden down by a standard-bearer's horse, and another is elbowed by a stalwart spearsman. Surely the young ladies must have been better cared for than that!

The artistic qualities of the picture are a striking cleverness in the management of over-abundant material, great skill in manipulation, and a sort of coloring which has every thing in it except refinement. Compared with such color as that of Jean Paul Laurens, this is sufficient and satisfactory, but it differs from the work of true colorists in affording hardly any delicate æsthetic pleasure. The final impression left by the picture, after many visits, was that it would be well suited for the decoration of some great municipal hall where magnificence was

an object in itself, but not so well suited for a private gallery, where it would be likely in course of time to pall upon the taste of a cultivated and fastidious private owner.

Professor Matejko came next after Makart in the Austrian section. His work is harder in line and more rubicund in color than that of Makart, besides which it has a strong tendency to the sort of ornamentalism which takes pleasure in the details of mediæval costumes. It is a kind of painting very well suited to the illustration of historical subjects, when the subject is of more consequence than the art. We have had several historical painters of this class in England and France, and we know quite well what that kind of painting naturally aims at. Elaborate studies of costume, in striking colors, with plenty of gold, silk, velvet, and embroidery, afford the artist every opportunity for making his pictures splendid. Ah me ! how one does weary of all this ! Just at first, when the romantic school of painting had established the right to treat a mediæval subject, it was interesting to see what could be got out of costumes which had been proscribed by the severity of classicism, but now we have had any quantity of them, and we know how little permanent power they have upon our minds. The permanent charm and power of painting depend upon its own melodies and harmonies, and not upon the repetition of other arts, such as those of the goldsmith or the embroiderer. These remarks are not intended to imply that Matejko devotes himself entirely to costume, but only that it is too predominant in his work. His heads are finely conceived and strongly painted, though in rather a matter-of-fact manner.

Munkacsy, the Hungarian, is more essentially the artist than either Makart or Matejko. At the risk of repeating what some readers will know already, I will tell, in a few words, the extraordinary story of his life. He was born in 1844 at Munkacs, in the north-east of Hungary, where his father had a small place in a custom-house. During a horrible massacre perpetrated by the Russian troops in the suppression of an insurrection, Munkacsy's family perished, but he was cared for by a poor relation, who put him as apprentice with a joiner who made chests for the peasantry. The lad was set to paint these chests with lively colors ; this amused him, and he tried his hand at a

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portrait of his uncle. At Pesth he painted a picture which won a medal at a Paris salon. After very nearly losing his sight from a disease of the eyes, he worked on energetically, and was encouraged by two artists, Than and Ligeti. From Pesth, he migrated to Vienna, wishing to study in the academy there, but he could not pay the charges, and so went to Munich, for cheapness. Here he was well received, and won prizes and money allowances. From Munich, he migrated to Dusseldorf, where he followed the teaching of the Academy in 1868, after which his paintings soon made him celebrated in Paris. Since 1875, Munkacsy has been classed in the first rank of modern celebrities, and the Exhibition of 1878 gave him world-wide fame. It is a long way from the joiner's shop, where Munkacsy painted chests for peasants, to the magnificent studio in Paris, in a fine large house of his own, where he painted "Milton and his Daughters."

The qualities of Munkacsy's style of painting are the result of his way of seeing natural objects, which is essentially that of a painter. I have seen material in his studio and watched his method of interpreting it which did not at all cling to lines as a draughtsman's method would do, but passed from one gleam of light and color to another gleam of light and color with the independence of a humming-bird amongst flowers. Few artists have in a more complete degree the childlike innocence of the eye. He sees things always together, and he always sketches, so that there are never any isolated bits that you could cut out, but all the picture clings together as one whole. Again, he does not care to copy mere ornaments, or indeed to copy any object merely for what it is: he takes the visual result which disengages itself from objects seen together, and paints that. It follows from this method of work that the faces and hands of Munkacsy's figures are apt to seem less well done, relatively, than the accessories, and in all the pictures that I have seen by him, there is something earthy in the complexions. There is also a certain tendency to blackness, which is the more to be regretted that the painter has really the eye of a colorist. Passing from these technical considerations to Munkacsy's rendering of humanity, I should say that his men and women are generally observed with much simplicity and truth. Their

attitudes are always unconstrained and natural, and there is no attempt on the part of the artist to impose upon us by theatrical affectations. Milton is grave and dignified in the picture (though I am not sure that the once handsome and robust poet really became so wretchedly meagre in his old age), and his daughters attend to him simply, as they probably did in reality. It is remarkable that so quiet a work as this should have attracted so much attention. I may observe, too, that in Munkacsy's other picture, "The Artist's Studio," he refrains, in simple modesty, from giving the public any idea of the real magnificence of his painting-room. His work contains a portrait of the artist showing a picture to a lady in blue, and the lady is his wife.

I have not space to say more about the Austro-Hungarian school, except that it kept up generally to a very high level, which seriously disquieted the French critics and artists. The result of the exhibition in disturbing national self-complacency, was especially visible with regard to the English and Austrian schools, and I never in France have seen such an effect before. I remember something like it in London in 1862, when English artists who did not happen to be familiar with the French school were made rather uncomfortable by the French exhibition, much to their ultimate benefit and advantage. I have no doubt that the effect of the Austrian and English exhibitions on French artists will be equally wholesome. It is much, already, that they should have lost their national self-conceit, and begun to perceive that they are not the only clever fellows in the world.

Not only Austria, but even Germany, hostile Germany, was well, though not very numerous, represented, and entirely by cabinet pictures, there being no room to hang vast historical compositions in the single hall reserved for the German school. That hall was one of the most agreeable and most interesting in the *Champs de Mars*, and French visitors heartily appreciated it.

It is hardly necessary to say that Knaus made everybody laugh by his extraordinary faculty of remembering and painting an expression, with the most vivid truth.¹ His picture of "A

¹ An American artist, Mr. J. B. Brown, painter of "The Passing Show," has the same gift also in an extraordinary degree. I do not mean to say that he is such a thorough artist as Knaus, but it is much to deserve mention in such company.

Promising Pupil " represented the interior of a Jewish old-clothes dealer's back shop, he sitting in an arm-chair smoking a long German pipe, whilst the boy is sitting opposite on a plain stool. The boy is listening eagerly to the keen Jew's advice and taking it all in with the most lively intelligence ; he, too, will win money—honestly?—that depends on circumstances, but you may be sure he will win money. The man seems to say, " Now, is not that a clever dodge ? " and the boy is delighted to feel himself able to appreciate such admirable astuteness. Now it is as easy as lying to write this down in words, but what must be the genius of the painter who can express it all in painting just as plainly as if he could make the people speak ? For this particular talent Knaus has not his equal in the whole world. There was another picture by him in the German room, representing the same Jewish boy, but this time alone. This subject was called " Une Bonne Affaire "—a good stroke of business. The boy is putting a piece of silver into his purse, the produce of his cleverness, with a surprising expression of delight. His present line of business is the rabbit-skin trade, but we may safely predict that in course of time he will rise to higher things. What a step from " Milton and his Daughters " and " The Entry of Charles V. " to this ! Here, precisely, is the glory of Art—that its field of labor is wide as the world itself, that the splendid royal pageant, the grave interior inhabited by august genius and misfortune, and the glee of an ill-dressed young dealer in rabbit-skins, are all alike subjects worthy of a great painter's skill and talent.

After Knaus I suppose the best known German painter is Kaulbach. He is not so essentially himself as Knaus—I mean that his art is not so directly an expression of his own observation of nature. A third person always seems, in Kaulbach's works, to come between, but it is not always the same third person ; sometimes it is the reminiscence of one predecessor, and sometimes of another, not that you can always precisely name the predecessor, but you perceive an influence. For example, the " Lady with her Son " is distinctly archaic, an imitation of early German painting in manner, but perfectly serious, and rich in fine technical quality. The explanation seems to be that Kaulbach throws himself so completely into the

spirit of the time he represents, as to become almost an artist of that time. Here the lady is mediæval, and so is the painting—better of course than painting was or could be in the real middle ages, yet animated by its quaint spirit. The subject is a lady of rank with her boy; she wears a coronet and a formal head-dress, and is relieved against a flat piece of drapery with straight edges, leaving a space of picture on each side for a glimpse of landscape where you see a castle and river. The boy holds a great sword in a crimson sheath. All this is treated exactly as a mediæval artist would have treated it if he could have painted with such skill, but when you turn to the “*Rêverie*,” by the same painter, you get into another region of art altogether. Here a lady in white satin is sitting in a magnificent apartment tuning her lute. She is dressed in white satin, and we all know the kind of art suggested by a lady in white satin with a lute. She carries us at once to Holland and Flanders, where she has been a standard subject from Terburg and Metzsu down to Stevens and Willems. In the present instance, Kaulbach, who was a mediævalist in the preceding picture, becomes a modern rival of the Terburgs and Metzus, and at once invites comparison with their successors. By his delicate transparent painting of figure, dress, and background, each in its own place, Kaulbach is technically on a level with the very ablest modern artists in the same style.

There were so many clever pictures in the German section that it is difficult to do more than mention a few of them. Nothing could be livelier or better in its way than Gieryski's “*Hunt in the Eighteenth Century*,” which belongs to the Berlin National Gallery. The huntsmen are all in a blue costume, and are dashing brilliantly through a coppice with all the gayety and animation which distinguished lordly hunting in those days. The painter was so perfectly at home in his subject, so completely master of his material, that our feeling of enjoyment was not interfered with by any sense of technical difficulty, and painting itself seemed as merry a business as riding a well-trained horse. A good picture by Diez, of Munich, was “*His Excellency en voyage*,” representing a great lord in his coach, passing through a wretched hamlet, the date being some time in the *siècle de Louis XIV*. The contrast be-

tween the pride of an ostentatious aristocracy and the wretchedness of a miserable peasantry, could not have been more effectively suggested. In the present day an "Excellency" travels with less display and through more prosperous populations. Bockelmann's picture of "A Bank Failure" brings us to some of the less pleasing realities of our own time. Depositors are crowding about the door only to learn their loss, and of course the painter does not fail to let us fully perceive the individual misery caused by these too frequent disasters. Unfortunately, as often happens when Art illustrates moral and social questions, its own exigencies and necessities are lost sight of, and the spectator, though his moral feelings are touched and his sympathies awakened, is not likely to receive any æsthetic gratification from the composition or coloring of the picture. I believe it may be accepted as a principle, that moral and social interests in painting are generally dangerous to artistic interests, and that a lady in white satin, idling with a guitar in a well-furnished room, is always likely to be better painted than an illustration of modern political economy or morals. It is not forbidden to painters to touch the heart, and one of the great advantages of figure-painting is that it can do so with so much effect. E. Hildebrandt, of Carlsruhe, had a very touching picture of a dying child, with her father and mother by the bedside, stricken with awe and sorrow. The scene was imagined with quiet truth and no affectation of any kind. You had only to stay a few minutes before the picture, to feel the interior of that peasant's cottage becoming painfully real. Another touching picture was by Petersen, of Munich; it merely represented the interior of a pew at church with two girls and an old woman between them, the old woman with clasped hands praying earnestly. A picture of an exactly opposite character was "A Conversation," by Werner, of Berlin, in which five royal guards dressed in a glaring and absurd old fashion, were talking to two maid-servants over a rail, the whole party being wonderfully merry. This picture greatly amused the general public on days when the exhibition was crowded, and so did Meisel's picture "At the Convent," an apparently very truthful study of monks who had over-eaten themselves. This appears to be rather a prevalent vice of

theirs if painters' "tales are true, nor wrong those holy men." Whatever the truth may be, it is certain that artists have a strong tendency to represent monks, when they represent them at all, like fatted swine which have gorged themselves into a state of somnolent stupidity, and the satire never fails to amuse the public, who do not stop to ask themselves how far it may be deserved. C. Gussow, of Berlin, had a popular success with clever imitative pictures, the portrait of an old lady, the interior of a studio with an old woman in it, occupied in dusting a plaster reduction of the *Venus de Milo*, and the interior of a picture-gallery where an old man is alone with the pictures. The degree of imitative skill attained in these works was remarkable, but ability of this kind is seldom associated with eminent artistic gifts of taste or imagination.

Some German artists possess a gift which has always appeared to me one of the most enviable—that of reducing the natural complexity of landscape to a simple yet satisfactory expression. People are very apt to undervalue this because the result looks easy, and has the appearance of having cost but little labor; yet if they knew how difficult it is to simplify nature well, they would appreciate a power which makes the human interpreter less the slave of detail and more free to seek the expression of the higher sentiments. One of the most satisfactory examples of this kind of painting was "On the Baltic Shore," by E. Dücker, of Dusseldorf, a very simple and apparently straightforward piece of work. A red evening sun shows through a dark bank of slaty cloud, and this with a gray piece of sea (what Morris would call "waters wan"), a sandy shore, and a little green vegetation with a few trees, produced an effect of dreariness not much enlivened by a few figures, but dreary or not, the spirit of the scene was there. A view of Scheveningen by A. Achenbach, with the full moon rising over red roofs and sandy dunes, had many of the same qualities, though perhaps with less striking simplicity of method. Munthe, of Dusseldorf, now a very famous painter of winter effects, exhibited a single picture, "A Winter Landscape," of course. Here, again, it is not so much the amount of labor given as the judgment with which it is applied that makes the result satisfactory. Truth of impression is the dominant qual-

ity of this artist's work, and a very great quality it is. His powers of composition and invention do not appear to be extraordinary, but his materials are arranged with taste. His mind has been so completely imbued with the appearances of the wintry landscape, that it reproduces them with striking veracity; and it is this veracity which has made the painter so famous. It is a pity, though, that his customers should tie him down (as I know they do) so exclusively to winter subjects. He paints other seasons of the year equally well, but sells them with some difficulty, whereas his winter scenes are always in demand. Another Dusseldorf man, C. Kröner, paints winter with striking truth; his "Wild Boars in Snow" was a remarkable picture, which conveyed the impression so completely, that the spectator felt himself in the dreary forest, and at the same time the boars were thoroughly well studied as animals in motion. Passing from winter to summer, I may mention P. Meyerheim's picture called "The Descent, near Bozen." The subject is a peasant coming down a very rough mountain road, with oxen. This was an interesting example of certain qualities and defects which are not unfrequently found together in modern art. The painter had evidently studied with great industry, and he could remember attitudes well, yet his picture failed from want of æsthetic charm, and then comes the question why were we not charmed by it? The answer is that the attempt to render very bright and clear sunshine is rarely pleasant, however successful; the result is apt to be inharmonious, hard, and cut up with numbers of little broken lights and shadows, as in this picture by Meyerheim. Unfortunately, in this instance, the material chosen very much aided this broken effect, so that there was no repose anywhere, yet the artist had plenty of technical skill, and certainly knowledge enough for work of a higher order. The most recently successful artists, such as Munthe, for instance, aim at more tranquillity, which is one of their greatest merits. One of the best of them, A. Lier, of Munich, exhibited a picture called "Autumn Evening on the Banks of the Isar," which belongs to the Berlin National Gallery, a beautiful landscape with water flowing over a weir and trees reflected in it, with a glowing evening sky. An excellent picture of wet weather, exhibited by H. Baisch, of Munich, represented "A Highroad in Holland," almost as watery as the canal in the

same scene. Landscape painting of good quality appears to take root of itself in certain localities very unaccountably from time to time, and often in the most unpromising places. Dusseldorf has been known for a long time as a nursery of German landscape, and of late years Munich is also known in the same way. In England we have had the Norwich school, and quite lately the London critics are beginning to speak with respect of a Manchester school of landscape painting. These little schools generally have their origin in the influence of one man, or else in the influence of a beautiful place, such as the forest of Fontainebleau or Bettws-y-Coed. Sometimes the very ugliness of a place drives men to paint beautiful landscape by mere reaction. Manchester produces landscape painters by its very disagreeableness, and I believe Munich is by no means rich in pleasant scenery.

In the Belgian exhibition one of the most conspicuous contributors was Charles Verlat, of Antwerp, who exhibited fifteen pictures, several of them of great size. The large canvas entitled "We will have Barabbas," forced itself upon public attention by an abundance—a superabundance—of vulgar power which could not be resisted, notwithstanding all the protests of the artistic judgment within us. Barabbas is carried away in triumph on a man's shoulders, surrounded by the coarse Jewish populace in high glee, every man of them as large as life, and so real that it is like seeing the men themselves in the glaring sunshine of Jerusalem, with the dust sticking to them and the shine of the perspiration on their skins. Whilst these wretches are dancing and grinning and kicking up their dusty heels, the face of Christ looks down upon them sadly, and Pilate is quitting the scene. To the right of the picture, the multitude are holding out their hands and pointing at Jesus, to the left they are more occupied with the man they can understand, their Barabbas. The *profanum vulgus* is realized here with terrible power, but unluckily the picture is vulgar as well as the beings it represents. A painter who gives himself up to realize with the utmost force the shine of perspiring skins and the appearance of dust clinging to the lower parts of the body, has lost that reticence which invariably marks elevation of artistic taste. It may be answered that there are passages in Shakespeare quite as coarse, and this is too true; yet a modern reader does

not admire Shakespeare for these passages, but in spite of them. Just so with M. Verlat : we admire his dramatic power, but we deprecate his coarseness.

This coarseness is less offensive in another large picture by the same artist, "The Defender of the Herd"—a buffalo fighting with a lion. The scene is a great arid African landscape, desolate to the utmost possible degree. We have a glimpse of a blue-green lake in the distance, with sandy, treeless shores and reddish mountains beyond. Strong, sharp shadows are cast everywhere, and yet the painter, from the want of good color, produces no feeling of sunshine. The foreground and middle distance are occupied by sandy hillocks, over which buffaloes are galloping, whilst one of them turns aside to punish a lion which he has thrown on his back and is goring terribly. The scene is impressive from its perfect unity of conception and power of realization, but it is oppressive at the same time, and unpleasant. It is difficult to understand in what kind of room such a picture could be permanently welcome. Possibly some African hunter, like Gordon Cumming or Sir Samuel Baker, might hang it in his hall along with other barbarous memorials of Africa ; or more appropriately still, it might be useful to the keeper of a wild beast show as a sign and advertisement. It is remarkable that the same painter in his "Mother of the Messiah" entirely lays aside his coarseness both of conception and of technical work, being at once elevated by his subject to a much higher and serener region of thought.

Like Verlat, A. Stevens exhibited fifteen pictures. His manner of work and choice of subject are so perfectly well known that it is unnecessary to dwell upon them. The best of his contributions to the Paris Exhibition seemed to me to be his portrait of a boy, M. Emmanuel Crabbe, by far the most distinguished-looking portrait in that part of the exhibition, as elegant as a Van Dyck, yet modern, and colored, not richly but with great taste, in a contrast of pale-brown and blue-gray—brown in dress, oak floor, hat, and dog, and blue-gray in gloves and curtain. The young face was very life-like, with rather a wondering expression, the figure most gentlemanly.

Other pictures by the same artist showed his usual cleverness in the arrangement of female figures with their shawls and dresses, all of course very ably painted, but without any especial

interest. Wauters, the historical painter, had three pictures of importance : "The Madness of Hugh Van der Goes," "Mary of Burgundy Imploring the Aldermen of Ghent to Pardon her Counsellors Hugonet and Humbercourt," and "Mary of Burgundy Swearing to Respect the Communal Privileges of Brussels." All these pictures had the same substantial qualities, being clearly conceived and firmly painted throughout, with little or no display of dexterities, yet always adequate skill. It is a satisfaction to see an artist making a reputation by good sound historical painting, because that form of art has been in some danger of a possible extinction, and it has its uses when founded upon sufficient data. Painters like M. Wauters really help us to imagine the past. The present runs no risk of being neglected, even in its most transient fashions. The Japanese craze, which reached, I hope, its zenith in the admiration for the ridiculous little bamboo inclosure at the Trocadéro called the "Japanese Farm," was prettily illustrated in a picture by F. Verhas, called "La Robe Japonaise." A young Belgian or French lady is dressing another in a Japanese costume, a subject arranged entirely on the principles of *Toulmouche*—that is, a clever bringing together of pretty girls and pretty things, but remarkable amongst pictures of its class for the great beauty of the painting, every thing being so thoroughly well done. The accessories in pictures of this kind are in fact studies of still-life, but where an old Dutchman contented himself with common household furniture and utensils, the modern Frenchman or Belgian chooses the most elegant things he can find, and associates them with the strictest regard to their effect upon each other, either in color or form. This is more the exercise of good taste than any really elevated art, but when it is well done, the result is pleasing, and I do not see that it does any harm to anybody, though it excites the anger of some artists and critics.

A kind of art more in harmony with the preferences of the present writer is that of Hippolyte Boulenger, the landscape-painter, who died in 1875, at the age of thirty-six. His father was an officer in the Belgian army, whose premature death left a young family with very little provision. How young Boulenger managed to study in his early years is one of those mysteries which often astonish us in struggling and difficult lives,

but he both studied for his own advancement and helped his relations, designing costumes and lace, and doing, no matter what, to earn a little money. His favorite place of study was Tervueren, not merely in the royal park, but in the surrounding country, which he explored thoroughly. He called himself, for fun, a pupil of the school of Tervueren, the only school there being that of nature ; but he got permission to use a loft over an empty stable as a studio, and painted there happily enough, whilst he hunted about the neighborhood for subjects. He became famous in his own country at the Brussels *salon* of 1872, when three important landscapes gave him a pre-eminent position amongst Belgian landscape-painters and won him a gold medal. Since then he has become known in France, and M. Tardieu wrote an interesting article about him in *L'Art* (1875). He was represented in the Paris Exhibition by five landscapes, of which my space only allows me to mention one, the view of Dinant. This picture is sketchy in style, but beautifully arranged and well colored in a cold key. The sky is entirely a play of white and pleasant grays, warm and cool, with little openings of blue. On your left is a mass of rocky cliff crowned with fortifications, and in the middle and farther distance are lower cliffs and hills. The middle of the foreground is occupied by the river with a raft upon it, and then you have the houses, quay wall, church-spire, etc., the whole keeping very well together, and painted quite in the spirit of a genuine artist, who sees things in his own personal way. The premature death of this painter is a serious loss to the Belgian school. I was very much pleased with the one picture exhibited by J. Quinaux, of Brussels, "A Ford on the Lesse." The Lesse, where M. Quinaux found the material for his picture, is a stream running over a stony bed under a high wooded bank, very like the stream scenery in some parts of Yorkshire or the Lowlands of Scotland. There was nothing extraordinary in the river, but the style of painting was broad and powerful, yet not without elegance, in the lighter tree forms, the color rather sombre, but true and just, especially in the relation between color and light-and-shade, so often neglected by painters.

Clays is so celebrated for his boat subjects that it is scarcely necessary to do more than mention them, especially as they have always the same qualities. His style of painting is not so

delicate as that of the old Dutch masters, nor is it so perfect in quality of tone, but it is much richer and more satisfying to a modern taste, being much more varied than the old Dutch work, both in color and execution. I may mention "Leaving the Basin, Antwerp," as one of the best examples of the master, both for strength of effect, and a pleasant appearance of ease. The sky is lightly brushed in grays and pale-blues, cold and warm grays playing together in the clouds; the principal vessels are a Dutch barge and a brig, the utmost advantage being taken of the coloring of the sails, white, umberish, or red. It is interesting when we are acquainted with the craft of art, to see how the masters make use of its resources. The brilliancy of this picture by Clays, depends on a narrow fold of a hanging sail which turns to the light and catches it brilliantly, apparently of course in the most accidental manner. Amongst marine subjects by other artists, I noticed one by T. Weber, "Low Tide at Ostende," a quiet picture of tumbling brown sea, quite true in color and in drawing of wave. This picture had the excellent quality of being well seen at some distance. Mr. Beer-naert's "Village of Domburg, Zealand," was a very truthful and simple piece of painting in many respects, but wanting in light, though the scene was in full sunshine. It was composed of commonplace but not inartistic materials, a rough sandy foreground, houses with red roofs in the middle distance, and a church-spire slated at the top, then a few trees and a cloudy sky. Continental painters of several different nations have got into a way of painting these village landscapes in a manner which is not unpleasing and shows some genuine love for nature, yet does not awaken any vivid interest in the spectator. Amongst Belgian artists who have attracted some attention of late, may be mentioned Marie Collart, who produces original pictures in a very decided manner, selecting for her subjects quiet familiar little corners, such as a bit of an orchard, or a mill with cows, or a glimpse of an old road. Madame Collart has a certain charm of quaintness, and, though the expression may seem contradictory, is at the same time original and old-fashioned. It is both a quality and a defect in her work that it has such an appearance of finality. She knows so exactly what she has to do, and does it so completely, that we wonder she does not seem to suspect any possibilities beyond. All her pic-

tures seem as if they had been produced according to a set receipt. This appearance of finality is, I think, more common in Belgium than either in France or England. For example, there is Bossuet, who has been painting warm evening light on picturesque cities for the last twenty years, and paints it still precisely in the same manner; Stevens, Clays, and Willems have not moved, mentally, out of the same circles of ideas since they first became known beyond the limits of their own country. The one versatile man is Verlat, but in him the motive-power is rude energy, and not the love of perfection.

There is a very strong prejudice in the public mind that an amateur has no chance of becoming an artist, but when you know the private history of artists you discover from time to time that the transition has been accomplished. There are instances of this in France and England, but one of the most remarkable of recent instances has occurred in the Netherlands. H. W. Mesdag, of the Hague, was an unknown amateur a few years ago, who amused himself by painting street scenes. By a happy inspiration it occurred to him that he would try to paint the sea-shore, and as he saw the waves with his own eyes, and not through the eyes of any other painter, he soon produced works which had all the force of a strong personal impression. For several years past his pictures have been amongst the most noted at the Paris salons where the artists especially took an interest in them. They are remarkable for great vigor of style and freshness of effect, qualities which are due to the strength of the impression received by the artist himself from nature, and to his courage in expressing himself at any cost, looking simply to the result and never caring about trifles. It may be objected to Mesdag's works that they are only large sketches, but there is, I think, a distinction to be observed between sketches which are large, and enlarged copies of small sketches. Whatever may be the processes used by Mesdag, his pictures never look as if they were mere enlargements, as so many French landscapes do. His long picture called "*Levée de l'ancre*," gives a powerful impression of the sea-shore on a windy day. You have the wet beach with the water swilling and swirling over it, the tumbling sea, tossing boat, and active, fearless men. The line of horizon is high, and the horizon itself long and monotonous; above it the clouds are rainy, but there is some fresh blue sky, and sea-

gulls are blown about in the wind. To have such a picture as this is like having a window close to the sea-shore without the wearisome noise of the waves. Two other pictures by the same artist represented a life-boat going to the assistance of an English crew shipwrecked at Scheveningen, and the same boat returning. The principal object of these works is to convey the general aspect and impression of such a scene to the spectator, the result of this singleness of aim being perfect unity. You are in the boisterous weather, interested in the life-boat, and oblivious for the moment of all the vanities of art.

This determined adherence to truth and unity of impression is the distinguishing merit of the best Dutch artists of the present day. Take James Maris, for example, and see how completely each of his pictures keeps to its own simple purpose! "On the Beach" represents simply a fishing-boat on the sand—not much of a subject; indeed, many critics would say that it was enough for a sketch, but not enough for a picture, and the canvas is rather large. Nevertheless, the spectator is not conscious of any insufficiency of material, and he is soon interested in the varieties of quiet color and satisfied by the learned execution. The picture as a whole is gray and silvery, painted almost entirely in *impasto*. Variety of color is got out of the coloring of the boat itself, with its red sails and a little green paint on the top of the stern-post for contrast.

Apol, of the Hague, exhibited a picture called "Landscape near a Dutch Town," from which I should infer that he is what in France is called an "impressionist," but he is a favorable specimen. The impressionists are a new sect, composed, as all new sects in painting invariably are, of young men who have not yet definitively formed their styles. The principle of their work is not in itself either inartistic or unphilosophical, considered as an interpretation of nature, but it involves the sacrifice of very much which has hitherto helped to make the strength of art. They go to nature and receive an impression (whence the title they give themselves), and the purpose of their art is to render the impression as a whole without either the painful study of parts or any scientific arrangement of material. I fully understand their theory, and have some sympathy with it as an honestly conceived idea, but it seems more applicable to rapid sketching from nature than to pictures on a rather im-

portant scale. In my view Mesdag goes as far towards impressionism as is really safe. The ultra-impressionists forget that people look at pictures very much at leisure, and that art must be deliberate to bear deliberate examination. Again, they confine their looking at nature to sudden impressions, because they desire to produce on the spectator that single-stroke effect which he would receive from a sudden sight of nature. The consequence of these principles is that "impressionist" pictures are never carefully thought out, and that the vanguard of the school rather despises artistic arrangements, just as the pre-Raphaelites in England used to despise the well-known and much hackneyed forms of compositions. Sects like these, when founded upon principles held sincerely, always bring a certain freshness into art, and are so far productive of good.

To return to Mr. Apol and his "Landscape near a Dutch Town." A brown-gray river ripples under a pale-brown-gray sky, and you have boats, steamers, sailing vessels, windmills, mills with long chimneys, and some old houses on the shore. The picture in point of color is little more than a harmony of browns and grays relieved by dark reds and a little pale-blue; the style that of the most comprehensive sketching, which tries to indicate every thing so that the spectator may get a summary of the whole. The criticism which prevailed twenty years ago would have called such a work "unfinished," but in these days we are more accustomed to the varieties of artistic expression, and may accept it simply for what it is—a work in which the incompleteness of parts is systematic and intentional, with a view to pictorial unity.

W. Roelofs exhibited a "View near Abconde," which belongs to a society having for its object the formation of a public gallery at Amsterdam, to be filled entirely with modern pictures. The subject was a river scene, with nothing peculiarly Dutch about it; indeed, such themes exist abundantly in French landscape. The river was not navigable, only a rather broad stream with trees on its banks and plenty of reeds and aquatic vegetation spreading on its surface and catching the sunshine. The merit of the picture lay in the artist's determined rendering of appearances instead of objects, which is the great secret of good landscape-painting. The aquatic vegetation presented

itself to the eye, chiefly as a space of intense light upon the water, as it often does under strong sunshine.

Leslie told me a story about the Duke of Wellington which I found afterwards in his autobiography as follows: "When I had sketched his figure I asked him to look at it. He said, 'You have made my head too large, and this is what all the painters have done to whom I have sat. Painters are not aware how very small a part of the human figure the head is. Titian was the only painter who understood this, and by making his heads small he did wonders.' " The great Duke was not much of a critic, but his criticism, though quite inapplicable to most painters, would have been very just with regard to one modern Dutchman, David Bles, of the Hague. His pictures are not without wit and intelligence, but all the heads are monstrously large in proportion to the bodies. The fault is more intelligible and natural than the opposite one of making them too small, since the head, as the seat of intelligence, naturally takes upon itself a degree of predominance out of proportion to its real size, so that there is a temptation to draw it larger than it really is.¹

The most interesting figure-picture in the Dutch exhibition was certainly C. Van Haanen's "*Bead-threaders at Venice*." A number of girls are at work threading beads under the presidency of a stout elderly matron. The qualities of the picture were striking, and in very different ways. It was full of human interest, to begin with, and of real sympathy with life; the figures were not lay-figures, but living human beings; industrious, yet not at all painfully oppressed by labor. Besides this human interest the picture had much artistic interest, for its clever grouping, well-observed or well-invented attitudes, and cunning though complicated arrangements of color, the various hues of dresses, beads, etc., being admirably dealt with—contrasted here, harmonized there, and every thing taken advantage of, either for its chromatic brilliance or its quietness. Mr. Van Haanen seems to have retained many of the good substantial qualities of modern Dutch painting, and to have added to them some modern Italian brilliance, which is not in his case pushed to the point of crudity.

¹ For an analogous reason all landscape-painters, without exception, draw the orbs of the sun and moon with enormous exaggeration of their real proportionate size in the heavens as measured in seconds of arc.

Josef Israels, who is now as well known in England as if he were an Englishman, exhibited four pictures, three of which are the property of British collectors. It is probable that he is well known in America, so that I need not dwell upon that remarkable sympathy with real poverty which is the strong point of his art. His color is not what is generally called crude, but it is unfortunately not really good color, being compounded of tints which may be "subdued," but are not particularly agreeable or harmonious. At the same time it must be admitted that Israels avoids the glaring errors of bad colorists.¹

Baron G. O. Cederström, of Paris (who is easily confounded with Baron T. Cederström, of Munich), had the most important picture in the Swedish exhibition, "Charles the Twelfth of Sweden, Killed before Frederikshald in Norway, crosses the Frontier, borne by his Guard." This picture was bought by the Grand Duke Constantine of Russia, and was one of the greatest successes of the year. It is a very sober and serious work, as may be expected from the subject, the power of it consisting in a vigorous manliness both of conception and execution. The temper of the painter seems to be in perfect harmony with that of some high-minded military officer, and the consequence is a dignity which impresses every one. Under a gloomy sky, along a dreary mountain road, amongst inhospitable rocks, in the depth of winter, the royal guards march sadly homewards, bearing the body of their world-renowned sovereign and general. A hunter has met the mournful procession and stands aside with his hat off to let it pass, whilst his dog howls in obscure canine wretchedness as the grave and silent bearers go their way. It would be difficult to imagine any form of historical painting more satisfactory than this. The subject is sufficiently near to our own time for all important matters of detail to be ascertainable, and the painter has that perfect sympathy with his subject which belongs to nationality alone.

¹ It has sometimes been a subject of regret that painters who have not naturally the gift of color should work in color at all. Why not paint in simple monochrome? The answer is that all opaque monochromes are chromatically disagreeable, especially when in course of execution, and that transparent monochromes are inadequate to the complete expression of a painter, even if we do not take color into consideration. Oil painters are thus driven to color by a technical necessity, even when there is no natural gift, and the consequence is, of course, that many artists work in color who have neither the pleasure nor the power of a colorist.

Sweden is rather cast into the shade by the more famous countries of the world, but she has had her Charles the Twelfth, and now she has a painter worthy to celebrate her hero.

Wahlberg, the Swedish landscape-painter, principally known for his moonlights, had several important pictures. Two of the best were a "Moonlight at Waxholm, Sweden," and "An August Night at Winga, near Goetembourg, Sweden." Moonlights have never been satisfactorily painted until our own time. Painters used to consider moonlight inevitably cold in color, though in nature it is often very warm; and they made it hard and vacant, when in nature it is generally soft and full of mystery. Wahlberg's color is not absolutely faultless; his skies have sometimes a dangerous tendency to a dirty brown, and his style of painting when he attempts sylvan landscape in daylight, is somewhat woolly and confused; nevertheless he is probably the best painter of moonlight who ever lived, and it is something to possess such a specialty. The quality of his work is simply to make you feel the same impression which you get on a fine, but not cloudless moonlight night at some rather quaint and quiet little harbor on the sea-coast. The "Waxholm" is a good specimen. It is a little fishing harbor, with rocky rising ground and a windmill, whilst nearer the level of the water you have houses, bridges, and a little jetty, with boats. The moon is in a sky with dark clouds and serene spaces, and the water glistens as all of us have seen it glisten under the magic light which makes the dullest pool poetic.

Munthe exhibited with the Germans by right of his residence in Dusseldorf, and again with the Norwegians by right of birth. In the Norwegian gallery his principal work was an intensely dreary fishing village under a dim sky with a struggling moon, snow on the ground, of course, and wan water with wavelets lapping the shore. The material consisted of four houses, shelters for nets, barrels, boats, and figures, but all these things were kept subservient to the intended effect of dreariness. It is one of the most astonishing things in human nature that people should be willing to give hundreds of pounds for scenes which are the reverse of cheerful; but sad pictures, like sad poems, awaken in the mind emotions of melancholy which are not without their charm.

The Norwegian school was rather strong in landscape.

"Midnight at Lofoten," by A. Normann, represented some precipitous mountains close to the sea, with snow in their hollows. The mountain forms were admirably drawn—I mean that the drawing displayed very thorough knowledge of structure, though it may or may not have been accurate as to portraiture; the color was not very agreeable, but may have been true, the whole scene reddened by the midnight sun. Another picture by the same artist, "A Fiord in Norway," was striking as an illustration of what is most characteristic in Norwegian scenery. Great masses of rocky precipice rose from the fiord, leaving only a little space of level ground, on which a few houses could nestle—houses communicating with the world by water only. High above the precipice were rocky peaks with snow in their hollows. All this material was treated with evident enjoyment of mountain forms and effects, as well as that pride and delight in the visible beauty or grandeur of the native land which is the right sort of patriotism for a landscape-painter. A much quieter scene by S. Jacobsen represented a path through a wood in winter, and displayed real power over the commoner aspects of nature, being equal, as a representation of sylvan scenery, to the better works of the French and German schools.

Limits of space, already exceeded, compel me here to bring these observations to a close, notwithstanding many omissions, the most important of which are the Spanish and Russian schools, both of considerable present importance and likely to become still more important in the future. It is useless to mention pictures without dwelling upon them long enough to give the reader some interest in their subjects and some explanation of their qualities; but this, if it be done in such a way as to make an article at all readable, occupies a great deal of room, so that not many works can be mentioned. To do any justice to the vastness of the exhibition in the *Champs de Mars*, a critic would require at least a volume for each of the greater schools, and it would not have been possible, whilst the exhibition lasted, for one man to get through such an amount of work. The critic who toiled too much would injure his powers of enjoyment—the most necessary of all his qualifications.

PHILIP GILBERT HAMERTON.

UNIVERSITY WORK IN AMERICA AND CLASSICAL PHILOLOGY.

AN attempt to define university work would inevitably end in so protracted a discussion of the idea of the university itself, that little room would be left for the proper theme of this paper. The term is undoubtedly vague. In England it has a different meaning from what it has in Germany; and in this country, although the ideal to which we are tending is rather German than English, the traditions of our older institutions of learning and the circumstances of our nationality necessarily modify the conception of university work. If we consider it to be the crowning exercise of an educational system, then we are confronted by the question, Does university work differ from college work in kind or in degree, or in both? This question also cannot be answered categorically. In Oxford and Cambridge, where the colleges constitute the university, it cannot be answered at all; nor are we aided in the solution of the problem by those Boards of Examiners which assume the name of universities, while discharging only one function of a university. In Germany, if we consider the *gymnasium* as corresponding in some general way to our college, the answer will vary according to the department. In some directions the *gymnasium* overlaps what we should consider university work; in others it leaves too much to the university teacher. Indeed complaints are rife enough in Germany that students come up to the university unprepared for scientific work in the classics; and the older the teachers are, the further back do they push the golden age when young men were fully acquainted with all the

technicalities of Latin and Greek grammar before they entered the sacred precincts of the university. The professors of my student days used to hold up their hands over eccentric formations and erratic accents and declare that it was far otherwise when their Plancus was consul, and the same doleful strain runs through the records of each preceding generation. But after making large deductions in view of this well-known tendency towards the exaltation of the past, there must be some ground for the complaint ; and, at any rate, when we look so much toward German models, it is the part of wisdom to guard against the evils which our leaders themselves deplore. It is true that there, as here, the voices of the reformers are not in unison : that some complain of the mass of subjects which must be got up for the examinations and so preclude the possibility of special research, while others maintain that early specialization is the bane of the intellectual life of the German student of to-day, and that in consequence of a narrowing range of vision everything is becoming hopelessly microscopic and hopelessly dry. But, in spite of this difference of opinion, it is not hard to see that the danger for any university life that we may have or may initiate will come rather from the tendency to specialization than from the attempt to take in too large an area of study, because that university life will be moulded mainly by young specialists, bred in the schools of Germany, who will very naturally measure the importance of everything by the standard of their own early success. The upshot will be that the crowded curriculum of the college will be followed by university courses in which detailed study and minute investigation will not leave time for a general view of any one great department of science or literature. In short, we shall have the specialist part of a German university based on the conglomerate of an American college. Such an incongruous structure can hardly be regarded with complacency as the best outcome of the arduous work of American teachers. University as well as college should be American, meet the needs of our civilization, and bear the stamp of our national character. In a previous number of the REVIEW, I have stated my conviction that a great deal would be gained by frankly recognizing the necessity that the work now done by the colleges should be redistributed. That

accomplished, and our secondary schools brought up to a higher state of efficiency, we should have the elements for the solution of the problem of university work in America ; and in the faith that these reforms will yet be wrought, I venture to anticipate that future and face the question, on the answer to which our higher intellectual life is suspended. For, as nearly all the learned activity of Germany proceeds from the universities, to which the French themselves attribute their defeat in the late struggle, so in this country, owing to the absence of any large class of men who enjoy at once cultivation and inherited wealth, the scientific work of the country must come mainly from those who are teachers, and who have to teach for the means of subsistence. In England a considerable portion of the best work that is done has no academic character, and it is not to be denied that the advantage is not wholly on the side of the German. The Englishman breathes a freer air and brings to his work a fresher realism than is possible for the majority of German professors, whose wide reading and quick sympathy cannot counteract the peculiar limitations of their existence—limitations, however, which are rapidly falling away in the new political life of the German people. The American professor, then, like the German, is not only the teacher of his class but the teacher of his nation ; and we must look to our universities and colleges for the bulk of our scientific work—mathematical, physical, historical, and linguistic. How to promote that work, how to make our highest educational institutions most effective at once for advancing the empire of knowledge and training the future leaders of American thought, is a question of the gravest importance ; and while no one man can hope to master the problem in all its bearings, every observant teacher, every scholar on whom rests the spirit of his vocation, can aid in the practical solution, if it be but by a single suggestion or by an earnest aspiration.

As was intimated in the beginning of this paper, no attempt will be made to mark off sharply the boundaries between university work and college work. There is much ground that is necessarily common to both, whatever theoretical difference you may make. The material, to a considerable extent, is the

same, and in certain departments the method must be the same. The student of a German university, if we take that as our type, has to traverse many of the authors whom he toiled over in the gymnasium ; and the university student, if he is to succeed, must be content to say his Sanskrit paradigms at twenty-one as meekly as he said his Latin paradigms at ten. Still the university differs, or, let us say, ought to differ, from the college, inasmuch as it should be a great laboratory of systematic research. On the other hand, it differs from an academy of sciences, inasmuch as it should be a great centre of instruction. To the combination and interaction of research and training, the German universities owe their efficiency and their influence, and whatever modification German methods must undergo before they can be made fruitful in our civilization, these two elements must always be associated in our highest work. True, an able explorer may be an indifferent teacher ; a good teacher may not have the spirit of initiative which leads to successful investigation ; but the two faculties, though not always in perfect balance, are seldom wholly divorced, and a university professor should possess both. Much of the wrong-headedness of unacademic scholars, wrong-headedness that seriously impairs the scientific value of their results, comes from the want of contact with other minds ; and the teacher who is forced by the exigencies of instruction to formulate his views may, indeed, be exposed to the great peril of premature dogmatism ; but if he is an honest man, he is compelled to grapple with problems which he might otherwise have left in abeyance ; if he is a sympathetic man, there is a woe upon him unless he conquer his hearer's conviction ; if he is an observant man, he will not fail to see new avenues of thought opening through the perplexities of his scholars. We often read of the solitary thinker's long struggles in the dark with some great question, from which the blessing of an answer is at last extorted, but we do not always know the full history of the problem, nor what pupil's keen objection or curious inquiry first evoked the contest. To the investigator, then, the teacher's function is not, certainly need not be, a mere clog on his work of personal research. Nor should the man who is conscious of an especial aptitude for teaching be content with the orderly arrangement

and the systematic communication of other people's results. He must not only judge for himself, he must work for himself ; and while special research has, it is true, the drawback that it tends to make the course of instruction less symmetrical, what is lost in the rounded completeness of form is more than made up by the kindling life that goes forth from every one who is engaged in the ardent quest of truth ; and so thoroughly correlated is all knowledge, that there are subtle lines of connection between the most remote regions of scientific study which vitalize theme and method through the whole intervening space. This thesis is far from being new, but it is susceptible of ever new and ever fresh illustration, and the career of any of the great men who have been at once great investigators and great teachers would be a profitable study for those who wish to make their academic life something worthier than a perfunctory discharge of mechanical duties. On the selfish and the indolent such lessons would be wasted.

But, not to incur the charge of mere declamation about ideals, which may be tolerated only in a holiday address, let us ask ourselves what can be done here in America for the furtherance of a higher standard of work both in research and teaching ; and this inquiry I desire to bring within the range of those studies with which I am personally most familiar. And yet I am not without hope that what I shall have to say of the subject of research and teaching in classical philology may have a wider application, and so be not unwelcome to those who believe with me that it is not in vain that the American student has been endowed with that "singular buoyancy and elasticity" which, according to Dean Stanley, is the marked peculiarity of our people ; not in vain, our unequalled adaptability, our quick perception, our straightforwardness of intellectual motion. We have the defects of our good qualities, no doubt ; but those defects do not preclude the possibility of scholarly work of a high order.

It must be confessed, however, that the outlook for the classical philologist is not encouraging. Let us imagine a young man fresh from the best German schools. Such an imagination would have been construed as a personal allusion twenty-five years ago ; it is hardly more definite now than to

suppose a graduate of Harvard or of Yale. Our young friend begins his novitiate either as a tutor in one of our large universities, or as a professor in some half-endowed college. The transition is one of the most painful that can be imagined. Even the return of the mythical good American from the Elysian fields of Paris could be scarcely less distressing than the descent of the enthusiastic student from the academic heights of German university life to the unromantic levels of the American class-room. If our hero had spent a semester or more at a minor university, or followed the exercises of a gymnasium for a few months, the feeling of exaltation might have worn off and the descent might have been mediated. But he comes from the best in quality and the richest in resource to our average. In the meagrely furnished library he misses his favorite books, or rather books which by frequent citation he seems to know; in the reading-room he cannot find the journals so familiar to eye and ear. He has no one who will suffer him to talk about the themes of his personal research or even the absorbing topic of his doctor's dissertation, because there is no one who has a like attention to exact from him in turn. His duties are eminently distasteful. Instead of following the history of a construction, chasing an etymon through a score of languages, getting at the sources of an historian, analyzing the style of an orator, he has to listen to translations of Xenophon's *Anabasis*, to correct exercises in which Darius and Parysatis continue to have two sons in all the moods and tenses, and, what is worst of all, he is often waked up out of his learned dreams to find that the irregular Greek verbs, which he once fancied he knew well enough, are to be an object of steady contemplation for the rest of his natural life, and that with all his gettings he has still no end of work to do in the mechanical mastery, so to speak, of the language to which he has devoted himself. The situation is grim, and there is little help from without. Sometimes he is utterly alone. Sometimes the traditions of the college or university do not favor easy intercourse between the principal and the subordinate teachers. But even when the older colleague is accessible and has gone through the same experience, even when counsel and sympathy are not far to seek, still the younger generation is naturally prone to consider their case one of espe-

cial hardship, and so they prefer to nurse their own bitterness ; and after a few years of repining at their situation, a few years of sneering at the possibility of American scholarship, they go the way of all the rest, edit some over-edited school classic, translate some convenient manual, get up a text-book of some sort, and in the lapse of time look with half-pitying, half-envious eyes on the lads who come back from their studies abroad conscious, as they were once, of a special divinity within them. And this is the history of many of our best men—not all their history, for it were not only foolish but criminal to measure a professor's efficiency simply by his written work. There is often a sublime self-denial in the resolute concentration of a teacher on the business of the class-room ; and the noiseless scholarship that leavens generation after generation of pupils is of more value to the world of letters than folios of pretentious erudition. It was with profound insight that the Greeks called higher study by the same name as personal intercourse. To the Greek, University students were *οὐ συνοῦντες*; and he who has made faithful use of this power of personal influence shall have his reward, even if he has nothing to show in black and white. Still, if individual research is, as we have seen, a necessary element of university work, it should not be confined to the four walls of lecture-room or laboratory ; it must find expression where it can encounter criticism, where its results can be corrected, if they need correction, where its method can direct and its life inspire others, to say nothing of that recognition which every true scholar craves from true scholars. It is sad to think that so plain a text should still need a preacher, but it will not need a preacher long. Even at the slow rate at which our philological life is accumulating, closer contact, and hence quickened activity, is inevitable. Every year the ranks of American philologists receive accessions of ambitious young men, and the chief care must be to keep their zeal alive. To this end the existing organizations are not sufficient. The American Philological Association—a comparatively recent institution—and its elder sister, the American Oriental Society, are praiseworthy expressions of the desire for a better state of things ; but everybody knows that these companies of scholars depend for their existence on the per-

sonal influence and reputation of a few distinguished men, and the meetings are too infrequent, the attendance too meagre, and the elements too varying to encourage the hope that the redemption of philology for which we pray is to come from them. Even in Germany, with its hosts of scholars and its narrower territory, the annual conventions of philologists do not seem to be so successful as they were in time past ; and what if Germany depended on those meetings for the inspiration of an entire year ? Indeed the question seems rather to be how to infuse vitality into our yearly meetings, and thus preserve these organizations for better times, than how to quicken through them the life of American philology. Both these associations to which I have referred would be roused to higher activity if there were similar centres of work all over the country. Wherever there is a college or university the professors and the advanced students—of whom a handful might always be found—should unite, not in a club for reading little essays and for miscellaneous talk, but for some kind of work, work in which all should participate. In these minor associations lines of research would be opened, material accumulated, crudities worked off, and papers prepared for publication. It is an open question how far such associations should be made a part of the official duties of professors and students, because the official tends to the perfunctory ; but they should have a place made for them in the organic plan of the institution. These gatherings, by bringing the older and younger men together, would do much to thaw the reserve of the hierarchical relations which we have inherited from our kin beyond the sea, and by stimulating production would make the establishment of a medium of philological intercommunication a more urgent necessity than it is felt to be now. The want of such a medium is admitted in some languid way, but there seems as yet to be no acute sense of the privation, and it certainly betokens great supineness on the part of our scholars that a country which boasts a *Journal of Speculative Philosophy* should not have even a solitary periodical devoted to a science which counts its professed votaries by hundreds, if not by thousands, and that our professors and teachers should be satisfied with consigning an

occasional paper to the slow current of a volume of transactions or exposing a stray lucubration to struggle for notice amidst the miscellaneous matter of a review or the odds and ends of an educational magazine. No greater need than a regular channel of intercommunication among the philologists of the country and such associations as have been suggested would quicken the sense of want, and the need would become a demand.

Local associations and a common organ would do much as incentives to research. Let us now look at the sphere of research and ask, Is there any work for Americans to do in the department of classical philology—any work for which they are especially fitted either by natural bent or peculiar environment? Or, to put the question in its mildest form, Is there any work in which they are not at too great a disadvantage as compared with their European brethren? The temptation to answer the question in the negative is very strong, and the classical scholar is almost excusable for yielding to despondency when he considers the problem of truly philological, not merely school-book work, under the conditions of American life. Who is a stranger to this feeling and who has a more bitter experience of it than those of us who for a large segment of their intellectual existence were cut off not only from contact with those who were pursuing the same line of study and pressing forward toward the same ideals, but from every sign of life from without, from new books, new journals, now by the pillar of fire which is called war, now by the pillar of cloud which is called poverty? But there is no need for any true philologist to lose heart under any circumstances that leave him access to the great originals on which our ultimate knowledge of antiquity must largely depend, and the complaints of the want of apparatus, natural as they are, must not be suffered to serve as a cover for indolence. Some of the greatest discoveries in physics have been made by the help of very simple apparatus, and the most learned men are not always those who have easiest access to the largest libraries. Still, no one who has to consider the future of higher classical work in this country can blink this question, and while it is impossible to discuss the subject in detail here, some disposition must be made of it. In

the first place, then, the disparity between European and American resources is diminishing. The increased facilities of intercommunication and the new organizations for controlling the mass of minor philological monographs enable Americans to work with almost the same advantages as their European fellows. Every important accession to philological literature may be laid on our tables a few days after publication, and in the matter of appropriation and assimilation of Continental results, Americans, partly by reason of their training, partly by reason of their greater receptivity, are often months and years in advance of their English cousins, who never seem fully awake to the merits of a book until it has acquired sufficient reputation to compel a translation into English—not to speak of the French, whose national weakness hitherto has been to neglect work done outside of their own borders. Indeed, when we consider the rapid growth of our American libraries, the rapid advance of bibliography in this country; when we reflect that a large portion of the volumes that cumber European collections is practically useless, and that the annual appropriations to some of our great libraries will soon enable us to compete with all but the very largest in the world; when we look at our accession-lists, as they are published from time to time, and compare the slow increment of some university and gymnasium libraries of Germany, in which, for all that, excellent work is done—we ought to take shame to ourselves for complaining as loudly as we do. And even if the average American scholar is not so well off in this regard as the average European, still he should bear in mind that, after all, the range of authorities is not so great, the truly indispensable books not so numerous, as might seem at first. What sensible man in editing a classic would undertake to read every edition, say, of the much-edited Horace? What student of Sophocles would deem it his duty to master every treatise in Genthe's catalogue? Especially ought we to practise a little philosophy as to the value of some of the inaccessible fruits of foreign learning, those two or three berries on the top of the uppermost bough, four or five on the outmost fruitful branches thereof. A well-known German house offers for sale sixty thousand dissertations. If you have a

subject in hand, send for everything in the line of your work. You will doubtless get a fair proportion, and when you have read half a dozen, remember that those you have not got are no better than those you have got, and do not mourn as those who are without hope for the missing treatises. So the failure to secure this or that Doctor-dissertation ought not to fill the investigator with hopeless gloom. The ordinary Doctor-dissertation is a thing to be written, not necessarily a thing to be read. It is a vindication of the young man's right to walk alone; but in the rarest instances does it give him a right to guide others. Not unfrequently these dissertations have, at all events, the semblance of being inspired, and the disciple rides his master's hobby out for an airing. Sometimes—indeed very frequently in the present drift of study—the novice is instructed to make collections in certain directions, and such collections may possibly be used by others when an organic principle is discovered to vivify them. In that case special investigations into the usage of individual authors may be turned to account, although so closely are form and spirit interfused that the lack of a generous command of the whole subject is apt to mar even the mechanical gathering up of phenomena. Still, these contributions are the most useful that young men can make, and as this is a line of work which is as open to American students as to European, far be it from me to underrate the importance of it in this attempt to console those who find so many monographs beyond their reach. But granting that all the literature were accessible, every edition of every author, every treatise on every subject, it would not be desirable to dull the freshness of appreciation which can only be gained by direct employment with the text, with the theme. It is, indeed, discouraging in the extreme to find after a long search that everything has been done, that your pet theory has been anticipated and your pet illustration has been used already; but all these “disillusionments” are not too high a price to pay for the confidence of immediate knowledge and the rewards which certainly await a careful and zealous explorer. The field of antique literature is indeed vast, but it is a narrow range as compared with the continent of commentary and dissertation, and any man who has a

scholar's familiarity with Latin and Greek can survey with his own eyes large stretches of the original sources of all our knowledge, and so gain new points of view as well as new illustrations for his theme. At first the lists of parallel passages, the masses of references, in the great editions are simply appalling, but a narrower examination will show that the parallels and references are mainly traditional, and that the individual contribution is slight. It would be invidious to specify, to point out irrelevant citations, references to spurious books, parallels from authors that do not belong to the same sphere of illustration and owe the mention of them to the accidental circumstance that the editor has had them for one reason or another specially in hand. These and similar blunders and shortcomings are much more likely to catch the eye of a student who has gone over the ground for himself and has exhausted his own resources first, than if he had been content to make a selection of the best things of others and to salve his conscience by hunting up a few little matters for himself. Let any one try what can be done by close study of a text, a complete absorption into the spirit of the author, and by a wide range of reading in cognate directions, before he says that Americans have nothing to do except to repeat the references of German books, or, at most, to run over the indexes of German editions. To have full organic value the passages must be read *in situ*, and every one who thinks as he reads—it is not every one—must have been amused by the droll irrelevance of much that is dragged in by way of illustrations, as well as amazed to observe the number of side-lights that have never been brought to bear on the theme under consideration. A lurid rhetorical extravagance of Juvenal is not worth a tithe as much to the historian of manners and customs as a quiet hint of Epictetus which is not recorded in the *index rerum*, from which so much learning is gathered. To be sure, no speedy reward is to be expected for this work except the delight of immediate vision and the consciousness of faithful effort; but either of these should be enough for the true scholar. Just now all that is expected of the average classical philologist in America is a meek reproduction of foreign wisdom, but the way to better things is open, and if the younger generation of

American university students will walk in it, if close acquaintance with the sources become the great characteristic of our philology, American books will receive higher approval from foreign critics than the half-pitying commendation with which they recognize the faithful use of the most recent German works on the subjects treated. But in order to walk we must stand on our feet, and, so standing, discard the leading strings which so many like to feel, even if they do not lean on them.

Of course if we persist in treading the eternal round of school-books, there will be less room for individual effort ; but even in the most thoroughly beaten track of classic literature there is something yet to be learned, and if the work of philology is looked at from the historical and the æsthetic side, all of it requires to be done over again every few years. With the progress of social science, with the advancing knowledge of historical evolution, the problems of antique culture, of antique legislation, appear in new lights ; and these problems are problems of abiding interest, because our own life is involved in them. Then, apart from the general improvement in method, with our modern facilities of transmission and reproduction, American scholars need not be shut out from their share in the positive gain to be derived from the newly-discovered inscriptions and monuments, which are adding more and more definiteness to our conception of the antique world, and are helping us to a better understanding of the dialectic life of the classic languages, and the cantonal and provincial life of the classic peoples. And not only so, but ancient history has to be interpreted into terms of American experience, and it would not be saying too much to maintain that many of the aspects of American life enable us to understand the ancients better than some of our European contemporaries can do. An audacious, inventive, ready-witted people, Americans often comprehend the audacious, inventive, ready-witted Greek *à demi-mot*, while the German professor phrases, and the English "don" rubs his eyes, and the French *savant* appreciates the wrong half. No nation is quicker than ours to take in the point of a situation, and there is no reason discernible why Americans should not excel in the solution of the most subtle problems of antique manners and politics.

But, aside from the special aptitude of Americans for the appreciation of the political and social relations of antiquity, due partly to our peculiar endowment, partly to our peculiar position, the æsthetic problems involved in the study of classical philology shift from time to time : the great masters ever need new interpreters. Even the best work done forty or fifty years ago leaves us thoroughly dissatisfied. Not only is there that sense of shortcoming which we feel in all translations, but there is often a repulsive, often a ludicrous incongruity, which shows a change of æsthetic basis. We might not choose Swinburne to interpret Sappho for us ; but Ambrose Phillips's versions, which hold their own in our manuals by a ludicrous anachronism, however admired in their day, are to us simply out of the question except as specimens of the taste of that time. Now Americans have proved and are proving every day that they do not lack subtlety of discernment, delicate appreciation, just comprehension, and responsive sympathy in their literary criticism ; but, so far as appears, there has been little independent treatment of the antique authors in this regard. Our æsthetics come with our grammars from Germany. All that we want is a little candor, a little courage, courage that would come from immediate study, and candor that would command consideration, if not the candor of partial knowledge.

It is true that the philologists of to-day, while they are extending the lines of their investigations in one direction, are narrowing them in another ; and so sharply objective is the character of the dominant school of philology that the very mention of the word "æsthetics" is almost enough to send the utterer into the camp of the *littérateur* and the essayist. Yet it is my firm conviction that the exact study of function will lead to valuable results in æsthetics as well, that the comparative study of syntax and the historical study of syntax are destined to give us a firmer foundation and a clearer outline for the whole structure of style than would have been thought possible some years ago. I appreciate the danger of the study as well as its fascinations. I know that leading critics have cautioned us against the hasty employment of grammatical peculiarities as indications of spuriousness or genuineness. I am not unmindful of the warning that "a statistic of thought is a monstrous illusion ;" but it

remains for me an ultimate principle that a true organism will make itself felt in every fibre of its structure, and wherever you can trace growth there you can find characteristic ; and therefore it is not absurd to speak of the æsthetics of syntax. But whether such a study can be put on a scientific basis or not, there is no question that the scientific study of syntax, or rather of function, either as a part of comparative or as a part of historical grammar, is a field which calls for any number of laborers. A few pioneers have opened avenues here and there, and monographs on isolated points or separate authors are appearing in greater and greater numbers in Germany. But there is ample room for workers in this department ; and this is work that can be done as well here as in Germany. It does not demand the vast apparatus which other studies seem to postulate, and it should be the business of our scholars all over the land to lend their aid. It is not given to every one to reach great generalizations ; it is given to almost every one to observe, to collate, to arrange. Here, then, is a province which has not been so occupied that American philologists may not find in it abundant room for the native sagacity, the unresting energy, which have distinguished our people in other departments of science. It is, indeed, a noble province, as the true philologist knows, and he was a great scholar in other lines of work who in his *Encyclopædia and Methodology of Philology* gives to grammar the place of honor, and says, with an emphasis that means much in a man of Boeckh's balance, Grammar is the highest problem of science. It is the *Σριγνὸς μαθημάτων* for philology.

As for lexicography,¹ especially Greek lexicography, no one can tell how much remains to be done. The history of words or constructions is seldom even so much as sketched, and the vast department of synonyms, which must be approached by each nationality from its own basis, is almost untouched in English.

We cannot, then, vie with European scholars in the study

¹ Unsere jetzigen Griechischen Lexika erheben sich, so dankbar man dem Fleiss der Sammler anerkennen muss, wesentlich nicht über den Charakter nothdürftigen Compilationen für praktische Zwecke. Zu tieferen Forschungen liegen nur Anfänge vor.—G. CURTIUS, *Leipziger Studien*, I., 56.

of antiquities except the Cypriote; we shall not have the same facilities for making ourselves accomplished epigraphists or palæographers, although, by ever-multiplying means of reproduction, inscriptions and manuscripts are not so remote from us as they once were; but in the mastery of the secrets of antique life, in the cultivation of our perception for the harmony of antique expression, in the patient disentanglement of the web of the ancient languages, why should we acknowledge so hopelessly our impotence? Why, at all events, should we not do enough independent work to give our teaching the impress and the inspiration of immediate knowledge?

But enough has been said on this score. Let us turn to the university as the training-school. A university, as I have already said, is not an academy of sciences, an academy of inscriptions and belles-lettres. It is a school, and the professors are not investigators merely—they are teachers. But as the German universities are more or less consciously our ideal, and as the universities are doubtless for Germany the great centres of learned research, it is very natural that prominence, perhaps too much prominence, should be given to this side of university work; and nothing is more common than a taunting comparison of the book outcome and the money income of English and German professors. If, however, a German university were nothing but a book-making and a dissertation-manufacturing community, it would not be worth so much to the world as a power and an example. And if it should appear that there is too much writing and too little teaching, too much and too early specialization of professor and student alike, too much formal lecturing and too little active interchange of ideas, we shall do well to pause before we undertake to import into our American educational system German methods with which Germans themselves are becoming more and more dissatisfied—to say nothing of the disparateness of the German and the American character. The German lecture-system has its advantages. If a real teacher be in the chair, the mere memory of his manner is a lifelong inspiration; but in too many instances the German course of lectures is a book doled out in small slices,¹

¹ Die Hauptgebrechen der jetzigen Studienart liegen auch jetzt noch unstreitig

plentifully garnished with the inevitable "literature;" and as the recollection of the droning delivery is anything but pleasant, so the inspection in after days of the carefully written notes often provokes the question, What was the use of all this? Inspiration there was none; the bibliography is antiquated in a few years; the crotchets of the professor seem to have hitched themselves to the pages rather than the great thoughts, if he had them, and Ritschl's outspoken contempt for *alte Hefte* finds ample justification. It is true that, as a rule, the great professors are well worth hearing, if but for what we may call the catalytic effect; but it is also true that the students attend too many lectures, and consequently fail to work them up, and, which is no small evil, are often forced to take them out of organic succession in order to hear them at all. There is a theory that studies are so arranged in Germany that any student who stays at a university for the *tricennium* or *quadricennium*, as may be demanded by the faculty, will have an opportunity of making the round of the different departments in their due order, but it is a mere theory for philology—certainly so far as the smaller universities are concerned; and when we add to this the natural, and, I may say, to some extent healthy, desire to migrate from university to university in order to preserve a freedom from bias, the difficulty of pursuing a proper course is enhanced. If the young men who take their doctor's degree in Germany would only publish in their *vitæ* the titles of the lectures they attended before they came up for examination, we should have an exhibit of considerable practical value, as illustrating the necessarily scrambling course of so many German students.

But the Germans long since observed the defects of the lecture-system pure and simple. The academic freedom, of which they are so justly proud, is a great thing, but all students are not ripe for it. More guidance would do no harm, though

von Seiten der Lehrer in dem nicht seltenen Mangel einer klaren Unterscheidung zwischen den Bedürfnissen eines Buches und denen eines Vortrages, und von Seiten der Studirenden in der allzu gehäuften Passivität des Hörens und dem allzu einseitigen Drängen zu den Brod- und Examinations-Studien.—BONA MEYER.

it need not degenerate into the tutorial grind of England. And, in fact, various methods have been pursued for a number of decades to counteract the funnelling process of lectures. In the physical sciences this good work is from the beginning an organic part of the study. The laboratory balances the lecture. In some faculties the *repetent*, or "coach," plays an important part. Then, in the historical studies, to which philology belongs, there are special clubs formed by the students themselves, there are private societies conducted by the professors; but the great organized agency is the *seminarium*, the theory of which is very well stated by the Owens College Extension Commission: "The ordinary lectures of the professors being continuous discourses, and the students being hearers only, and not subject to any oversight as to attendance and industry, it is found that this system does not suffice for the training of those who are themselves to be teachers. To meet this want the *seminarium* was established. A limited number of students, whose merits and adequate preparation are ascertained, are in the *seminarium* drilled in the manner usual in college lecture-rooms in England, but with the special object of qualifying them for original investigation and for the higher teaching posts." This is the theory; but in practice so much depends upon the individuality of the director that a general criticism is impossible: and to pronounce an opinion on the basis of personal impressions now a quarter of a century old would be manifestly unfair. At the same time, there is not a point in which those impressions have not been confirmed, either by recent writers or by those who are fresh from the universities where the voices of the great teachers of my youth have not so long been silent; and it is not hazardous to maintain that as the German lecture-system can never be transplanted in its entirety to our academic soil, so, for many reasons, the German *seminarium* must undergo important modifications, at least in philology, if it is to be fruitful in our country.

As to the medium in which the philological *seminarium* is to be conducted, there is something to be said in favor of retaining Latin for certain portions of the higher work; but if this is done, more time must be devoted to the acquisition of

the necessary facility than seems to be allowed to it now in Germany. I have been ear-witness of all manner of absurdities, which were not less absurdities because they were learned. The Latin academic oration may pass, though few official orators study the prime condition of a clear and simple style, and the portentous periodology of many professors of eloquence, as they are called, "would have made Quintilian stare and gasp." That is a matter of taste. But I have known a man of real ability to come into the *seminarium* with a ponderous Latin treatise on Hesiod which he read with the utmost vehemence and volubility for the space of three quarters of an hour—vehemence and volubility which would have made even his German a sputter; and under the spell as I was then, I cannot say that I had any high opinion of the virtue of such an exercise. Training the ear as well as the eye is of the greatest importance, and entirely too much neglected in our ordinary methods of instruction; but apart from the modest range of philological debate, the ear should be trained by listening to the verses and the periods of the ancient models themselves. If the discourse of the professor is to be an immense convolute of labored Latinity, if the student is to be allowed in his oral use of Latin to revel in false quantities, slipshod syntax, and parrot-like phrases, the sooner the Latin medium is done away with the better. The training that the German boys get at their *gymnasia* in the classic languages is much better than ours, as is shown by the difference of the work required in our colleges and the German universities, although the students in both are very much of the same age; but it would be a great mistake to suppose that the few hours' practice in *Prima* will give a young man such a command of Latin that he can use it with ease and correctness even within the narrow compass of philological subjects; and while the professor may at times be moved by the agony of his ears to remonstrate with the *candidatus philologiae* on the score of his language, such expectorations come to be regarded as the *obligato* steam-whistle of the machine, which carries the passenger to the end of his journey for all that. If this is the case in Germany, if the professors there, with their advanced students, find it hard to harmonize attention to the

form, with attention to the matter of the disputants, we should be very much worse off here : and for some time at least Latin exercises of this sort should be intended chiefly for the study and practice of the form. In the main, then, our *seminarium* work should be conducted in English, practice in oral Latin, and, what is much to be desired, in oral Greek, being relegated to special hours.

Let us now consider the matter, the work itself. This, as has already been stated, depends so much on the personality of the director that a general criticism is hardly possible. The professor is perfectly free to teach in his own way, and it is supposed that the student is perfectly free to learn in his own way, although if the professor be a man of high position there will always be some who will consider it safer to learn in the professor's way. If he be a man of commanding intellectual force it is almost impossible, even if it were desirable, to resist the pressure of the head of the school and the school itself. To speak, then, of the work in a German *seminarium* as if it were uniform would be glaringly inappropriate ; and an exposition of the *seminarium* studies going on all over Germany, even if all the material were accessible, would require too much space. Still, there are certain lines of work which in the nature of things must be kept up in the *seminarium*, however directed, and of some of these I would say a word so far as they may be thought applicable to the state of things here. In Germany the *seminarium* consists of the pick of the students. Full membership is an honor, and the meagre endowment of the position is not despised in a poor community. There are regular members, associate members, aspirants, and listeners. Here, for lack of material, we could not afford to be so discriminating ; and we should be obliged to make the work less pretentious, not necessarily less effective. Two things the *seminarium* should strive to develop—power of presentation and power of research. The former is too much neglected in Germany, and ought to occupy a more prominent position in the training of the future scholar than it does there. It is not given to every one to make great discoveries, and even those who are endowed with keen sagacity or a happy vein of divina-

tion vary in their achievements, as they vary in their moods ; but every one should be trained to sort his materials in an orderly manner and present the sum of his observations clearly and succinctly. And the importance of this is too much overlooked in the German schools of philology : and in endeavoring to rear an American school of classical philologists we ought not to encounter the reproach of formlessness in our studies of form, of being æsthetical in everything except in what we write.¹ Of course it may seem school-boy work to make abstracts, to sketch outlines of monuments of literary art ; but for all that it is an important exercise, and skill in it one of the most useful facilities that a philologist can possess. Such an outline is worth all the æsthetic criticism that a young man can excogitate, because in working it out he must necessarily put himself, to some extent, in sympathy with his model, and thus learn to appreciate transition and motive far better than he could otherwise have done, far better even than if he had translated the piece, because the translator follows the author too closely to see the track he is going. But to make the work truly profitable it must be synthetic, not analytic—a *Nachdichten*, as the Germans happily call it, not a dissection.

A regular part of the duties of the *seminarium* consists in the exegesis and textual criticism of the classical authors. It is high time that more attention were paid to the former element by German editors, the best of whom have seemed to consider the function of a commentator beneath their dignity, and prefer to show their command of the author in hand by implication. There are said to be signs of reaction. Whether the *seminaria* share in it I do not know ; but so long as the directors prefer criticism to hermeneutics—so far as the two can be separated—the pupils will be prone to spend most of their time over

¹ Die englischen Universitäten entwickeln bei ihren Schülern neben einem lebendigeren Gefühl für die Schönheit und Jugendfrische des Alterthums auch den Sinn für Feinheit und Schärfe des sprachlichen Ausdrucks in höchst anerkanntenswerthem Grade, und dies macht sich bei ihnen namentlich auch geltend in der Weise, wie sie die Muttersprache zu handhaben wissen. In dieser Richtung ist, wie ich fürchte, eine der schwächsten Seiten des deutschen Jugendunterrichts zu finden.—HELMHOLTZ.

various readings. Now, a considerable portion of the business of the future teacher will be the exposition of classical texts, and the members of the *seminarium* should be taught how to construct a commentary for school use, as well as incited to attempt the elucidation of authors that lie outside of the beaten track. This is not the place to set forth the virtues of a commentator, but many of the qualities that are required may be the result of training—the sense of proportion, the suppression of the inevitable tendency to over-interpretation, the rigorous exclusion of irrelevant matter, the honest grapple with real difficulties. A useful study for the young philologist would be the comparison of commentaries from different periods, in which the history of philology would fairly mirror itself: and if he wishes to assure himself that his is a progressive science, he will be much comforted by reading the lucubrations of great scholars on points that are now within the knowledge of every one.

The prerequisites of textual criticism are so numerous that, except in case of great native endowment, it is hard to see how the student can do much more than make a beginning in his university years: and yet, with some slight palæographical knowledge and some second-hand views concerning families of manuscripts, a great deal of juvenile criticism is done in Germany and elsewhere, largely of the conjectural sort. But it is not enough to write the peccant words in uncials and stare at them until something suggests itself more satisfactory to you than the text. In order to restore the lost fibre you must know every other fibre; and conjectural criticism, apart from a thorough knowledge of an author, no matter how successful, is but a genial guess. And as for the “duodecimo critics,” as the German would call them, who are publishing their *adversaria*, *miscellanæ*, and *collectanæ* in imitation of Madvig and Cobet, many of them should be impaled in the *seminaria* as warnings against rash generalizations and wanton disregard of the laws of grammar. Nothing can be more revolting than a whoop of triumph over a “lucky divination,” which the uniform usage of the language shows to be an impossibility or the habit of the author proves to be utterly unnecessary.

Critical studies should certainly form a prominent part of the *seminarium* training, but they should not absorb all the energy of the class. But, after all, the handling of the authors does not appear to the member of the German *seminarium* as the main thing. The *Arbeit* is the crown of the *seminarium*, as the *Heft* is the glory of the lecture. The *Arbeit* is supposed to represent original research. To develop this power, not given in its highest sense to many, is, indeed, one of the most precious results of university training. But there is research and research. Some investigations involve little more head-work than the sorting of nails, while some bring into play every high faculty of understanding and imagination. It may be well sometimes to temper the enthusiasm of those who consider themselves qualified for more exalted activity by forcing them to perform those mechanical tasks which are inevitable in all prolonged research, practising the eye, training the hand, and breaking in the eager feet to a steady pace. But if there is any capacity for higher things, the student should be encouraged to put to the test his right to independent research. Now, it is in this department that the most difficult work of the university teacher lies: most difficult because it cannot be achieved by mere industry. True, study can do a great deal. A wide knowledge will reveal many gaps which are yet to be filled; but if the teacher tells the student too much, he is virtually doing the work himself, and doing it imperfectly, besides destroying the spirit of initiative which is the great gain of the whole matter; if he tells him too little, the young man is apt to flounder hopelessly in a Serbonian bog of extemporized erudition. Some professors cannot imagine any greater happiness for a student than to work in the same direction with the master, and the native bent of the pupil goes for nothing in the calculation; while others genially toss the neophyte into a mass of controversy of which the younger man knows nothing, the older man very little; and at the end the teacher is not competent to criticise without a careful study of the whole question, which he may, of course, accomplish more rapidly than the beginner—if he has nothing better to do on his own account. It is indeed a glorious thing to make some substantial addition to science, however small it may be. It is the

promise of future usefulness, the earnest of a higher life ; but, like other glorious things, it must be worked for, and the theme should evolve itself out of a range of reading ; and in the early stages of university study especially, more good might be done in the way of training by putting questions that have already been solved, and furnishing the materials for problems that have been triumphantly settled, than by forcing the student to attack such fresh subjects as may be hastily started for his experiments. The future mathematician, the future chemist, the future professor of physics, have to undergo a long apprenticeship in such solutions. The future philologist is too often compelled to grapple with questions the conditions of which he cannot possibly command. It is true that any subject which stands in organic connection with philological science cannot be pursued without ultimately involving the whole ; but it is not a matter of indifference from what point you start ; and the most fruitful work is that which grows out of wider study. No man can labor in any portion of his department without finding much that is unsettled ; and a genuine curiosity once excited, the *punctum saliens* of scientific life is there. To put into the hand of a young man the first dissertation at your elbow, and bid him pick it to pieces, or to assign to two callow youngsters sides in a philological discussion—these processes, so familiar in German universities, do not lead to the highest results, nor do they breed the best habits of mind. The criticism should follow an independent study of the subject. The disputation should grow out of a genuine difference of views between those who are working in the same direction. It should not be what the German *Burschen* call a duel *pro patria*—a mere official combat. All such sophistic displays are remnants of an earlier system of education ; and the greater the success, the worse the habit that is engendered of criticising for the sake of showing superiority, and the more acrimonious the tone of the controversialist, who at last fuses the personality of the investigator with the truth, which he is supposed to be seeking, and, like a famous German scholar, declares any denial of his principles to be the mysterious sin against the Holy Ghost. At all events, in our endeavors to organize university work here, let us, in

appropriating the good that Germany has to show us in abundant measure, learn to avoid the evil. Special studies by all means, special into the minutest variations of form and structure, the exactest detail of statistic. But, for all that, let us not lose sight of the magnificent idea of philology, which is instinct with the life of humanity. Let not æsthetical babblers and philosophical phrase-mongers frighten us from æsthetics and philosophy into arid regions whither no one will follow us, and, which is worse, whence we ourselves may never find it possible to escape. In Germany classical philology may survive for generations by virtue of the organizations already established, but in this country, where the scientific study of the department is yet to be built up to the university standard, it would be folly to sever such connection as the classics have with the life of the people. French scholars sometimes sigh for German methods of instruction and research; but the wide circulation of the classical studies of such writers as Boissier and Perrot is a good sign of the intelligent interest of the cultivated public in these subjects, and without such an intelligent interest the department must die. Almost every Greek and Latin writer of note has been translated into French. How many gaps there are in English no philologist needs to be reminded. The Didot collection has been of immense service to classical letters, and I remember the emphasis with which one of the leading philologists of our century dwelt on the value of the Latin translation which accompanies the Greek text in that series, and the generous heat with which he warned his disciples against alienating those who were in sympathy with the classics by convenient sneers at defects in technical scholarship. Here, certainly, we need all the support we can get, and the university professor, while making his researches and training those who are to be the teachers of the country, should not forget his duty to a wider public. The danger of this, however, may not seem to be imminent, and for the present it may be more important to insist on the esoteric work and to study the conditions of higher philological training in American universities. But, as has been intimated in a previous portion of this article, the tendency of our younger university men will naturally be to over-

specialization ; and while it is very true that the transition from what may be called the formal side of philology to the study of history, antiquities, and art is much easier than the reverse, and should therefore form the staple of university instruction, no one, teacher or scholar, should so lose himself in grammatical and critical studies as to become insensible of the deep truth which is embodied in the old term, the *humanities*.

B. L. GILDERSLEEVE.

SCIENCE AND A FUTURE STATE.

IN a previous article¹ the attempt was made to describe the present positions of the two contending hosts of science and religion, and to show that there is in reality nothing at all between them resembling a serious engagement. The main armies of both keep to their own ground, and it is only the outlying stragglers who now and then come into collision. Allusion was there made to the possibility of a reconciliation between the two ; let us therefore discuss at the outset the form which this must inevitably take.

In the first place, it is clear that before there is permanent peace, or even a temporary truce, both parties must meet together on common ground. But at present their standpoints are widely different. If we go first to the one camp and then to the other, and consult the extreme partisans of each, we shall be tempted to believe that any theory which satisfies the intellect of man must inevitably produce confusion in his moral spiritual nature, and *vice versa*.

Thus orderly cosmos has disappeared, and chaos comes again, triumphant as at the beginning.

Need we say that such an issue carries absurdity on its face.

It is speculation run mad, or rather dressed up in a fool's garments, and represents the truth just as faithfully as the usual Christmas burlesque does the actual occurrences of every-day life.

We may, therefore, take it most absolutely for granted that a true cosmical theory will satisfy all the faculties of man, and thus, in discussing a scheme of reconciliation, we may begin from either side.

¹ Princeton Review, September, 1878.

Choosing the intellectual point of view, let us now inquire what is the fundamental position which the man of science assumes in all his attempts to understand the world around him.

There ought to be no mystery about this. We are furnished with certain intellectual instincts, just as we are with the organs of sight or smell, and the appeal must always be to these in the last resort. In turning over the various hypotheses presented to him with the view of selecting one of them, the man of science very much resembles the frugal housewife who goes to market, and she must be either a very bad housewife or entirely deficient in some of her senses if the vendor succeed in persuading her that a piece of putrid meat is really wholesome food. As in this instance the senses insist on being satisfied, so does the intellect in any cosmical hypothesis which may be presented to it. But before discussing, or even naming, this deep-seated intellectual requirement, let us try to show the way in which it pervades all our habits of thought.

When a new event or new thing comes before us we invariably ask ourselves three questions, which we may call the *how*, the *when*, and the *where* of the universe. When did it occur? where did it occur? and what were its antecedents? To say that an event took place in no particular locality, at no particular time, and with no definite antecedent, would be to announce an absurdity. Thus a man is found lying dead—it may be murdered—and we ask ourselves when did he die? where did he die? and from what cause did he die? We are not now discussing a moral question, and therefore we need not inquire whether he was murdered, and, if so, what was the motive of the murderer. The physical aspect of the problem is sufficiently explained by the three questions we have put. In like manner, if a complicated machine is brought before us, we ask ourselves when was it made? where was it made? and how was it made? Whether it was made by A, B, or C is another thing. Nor can we refrain from asking ourselves these three questions even in cases where we are unable to answer them. If a large diamond be found, the man of science, over and above the points of value and ownership, persistently asks himself not only when and where but how it was made, although he is quite at a loss to reply to any of the three.

Occasionally, no doubt, a strong prepossession has induced some to ignore the necessity of entertaining these three fundamental inquiries. For instance, it used to be maintained by a class of theologians that the world was only five thousand years old, and was made in seven ordinary days. And when geologists brought forward the existence of fossil forms as a proof that this theory was wrong, it was still maintained by a few that such forms had never truly lived, but had been created by the Deity by way of trial to our faith. Some even went the length of saying they were the productions of the devil. But it was soon seen that it would be a much greater blow to our intellectual instincts to acknowledge this position than it would be to our faith were we to acknowledge the inaccuracy of the then received interpretation of the first chapter of Genesis.

Let us not, however, conclude from this instance that in such questions the theologian is always in the wrong and the man of science always in the right. Far from it; the present controversy has, we believe, arisen because both parties have ignored the duty and the privilege of asking themselves the three questions above mentioned in all conceivable cases; and we rather think that in this respect the man of science has been the greater culprit of the two. For what are the disciples of the extreme scientific school now doing? They have by a kind of development reached at length an intellectual region, a most unpleasant one it must be owned, and eminently repulsive to the theological mind. Now would it be a slander to hint that possibly this repulsion of theologians may have (unconsciously, of course) induced them to settle down here and to decline proceeding any further? At all events here they have encamped, and have lost no time in issuing a sufficiently insolent invitation to all men, and especially theologians to join them as captives and give up the fight. The theologians, on the other hand, unwilling to leave their old-established quarters, have been too intent on scrutinizing their adversaries' camping-ground to perceive that a little further on there was a region with ample elbow-room for both armies.

But it is time to name the great law which underlies and regulates all scientific inquiry. This is generally known as "the

principle of continuity," and the method of applying it will best be seen by selecting one or two examples.

Suppose, for instance, that we wish to speculate regarding the origin of a quantity of small shot. The shot are very small in size and their number is very great. After a thorough examination of them we are led to believe that each shot is a perfect sphere, and that they are all of one size. We have arrived at this conclusion by a strictly physical process, and now at length the philosophical discussion is about to begin. Let us then briefly enumerate and discuss the various conceivable hypotheses regarding the origin of the shot. In the first place, it might be said that the shot had started into existence either by virtue of their own inherent power or through a sudden and incomprehensible operation of the Deity. To this the man of science would reply, that such an origin would put to permanent confusion the human intellect, which could not help trying to imagine how the particles came together into their spherical form, but would be abruptly pulled up by means of this extraordinary hypothesis.

In the next place it might be argued that the shot had existed as they were from all eternity, but a little reflection will convince us that this explanation no less than the former, dismisses *the how* of the shots' origin without in the least satisfying the intellect. It is something that (like a will-o'-the-wisp) is always in front of us, and which we can never possibly overtake. Indeed, according to this hypothesis, the particles which form the shot were never brought together at all. Again, it might be alleged that the particles were brought together into shot through the operation of purely natural forces, such as those which produce sand, and without the intervention of an intelligent being like man.

To this the man of science would reply that we know the *modus operandi* of blind natural forces well enough to be sure that they could never produce shot of a uniform size and perfect sphericity.

Such forces can turn out rounded pebbles or grains of sand, but a want of uniformity is the invariable characteristic of their operation. We need hardly waste time over a fourth conceiva-

ble explanation alleging that the shot are the eggs of animals, such eggs presenting often a spherical form and great uniformity of size, but we may proceed at once to the last and true explanation, which tells us that the shot are produced by some intelligent being working in the universe and designing uniformity. Now, while the mind dismisses the false and accepts the true explanation, it will be seen that in so doing it relies rather on its own instincts than on a set proof such as would satisfy the disciple of Euclid. In this case the healthy human mind does not hesitate one moment in the selection of its explanation, and were any one to insist on a more rigid demonstration, we should be disposed to treat him as an imbecile rather than attempt to gratify his unhealthy craving. Indeed any such attempt would be utterly hopeless; it would resemble an explanation of the nature of color to a blind man, or a description of the sound of a trumpet to a man who has no ears. We decline, therefore, to treat with such a man, perceiving in him the evidence either of a natural deficiency or of a perverted mind which has allowed certain of its powers to usurp such a mastery as to oppress the others—perhaps even to obliterate them.

But here we can fancy the critic saying, what conceivable use can there be in this elaborate discussion about the origin of shot? We are unanimously of opinion that any one who entertains the smallest doubt on the subject must be either a fool or a madman. Is it possible (he may go on to say) that in this or any strictly similar case any sane human being can hesitate for one moment as to the conclusion which he should adopt? We, of course, acknowledge that the Deity is the great first cause not only of the universe but of all events, and yet He only acts in such a way as not to put the intellect to permanent confusion. Had there been some overwhelming motive for the man you speak of to come to a false conclusion regarding the shot, we should of course simply have pronounced him prejudiced, but in absence of any such we must pronounce him imbecile.

It thus appears that in this and all analogous cases the choice lies between prejudice and imbecility when a wrong conclusion is adopted. Be it so. Let us therefore bring before our imagi-

nary critic a strictly similar case, and see whether he will still adhere to this verdict.

The atom no less than the small shot or the brick is a collocation of something. We shall certainly never behold it even with the most powerful microscope, but there is nevertheless a general consensus amongst all men of science that the atom truly exists. Some even go to the length of saying that it is the only immortal being, but we need hardly discuss this doctrine just now.

Thus the atom is only present before the "mind's eye." Some fifty years ago it was believed that there were about sixty kinds of atoms, essentially different from one another, but the tendency of recent speculation inclines towards the doctrine that the bodies called by us elementary are in reality compounds, being built up of some simple and primordial atom which itself never appears in a state of separation.

Now while physical research has conducted us onward to this primeval entity, it is at length abruptly pulled up and is totally unable to travel further. It has had given it a cluster of bricks bound together with a kind of mortar, and it has laboriously picked to pieces the individual bricks. But here it must stop, for it is clear that quite a different process is now required to throw light upon the mode of construction of the bricks. The technically scientific task properly ends here, and the labors of the scientific philosopher begin. But no sooner are these commenced than it becomes obvious that a variety of people are, from one reason or another, induced to make an exception of the atom. They will not argue regarding its origin, as they were content to do in the case of the shot. As these people are far from imbecile we are thus induced to imagine that some prepossession may perhaps explain their strange intellectual behavior. In trying to ascertain the truth of this it is well to bear in mind that prepossession or prejudice has the same dual nature as electricity, so that whenever a *positive* prejudice is developed we may be sure there is a *negative* one not very far off.

Let us then begin with the positive prejudice. It has, we believe, been the doctrine of a certain school of theologians that the visible universe was created by the Deity *out of nothing*.

Now an exception must at once be taken to these last three words, as they are frequently understood. If they mean that the antecedents of the visible order of things was something which we cannot now appreciate or grapple with, we are quite willing to concede the point. But if such theologians mean to assert that this antecedent was simply the will of Deity exercised in a manner that now is and will forever remain incomprehensible to all created intellects, we may fairly ask what right they have to manufacture such an astounding statement. In this case all strictly intellectual discussion must begin with the atom already made, and the process of its construction must remain as incomprehensible to all created intelligences as the origin of shot or bricks would be, were these suddenly to start into being out of nothing. No doubt, in point of fact, the man of science is now stopped at the atom, and perhaps scientific speculation may not in this world succeed in penetrating the barrier. But to maintain that all intellectual efforts must forever be stopped at this point is only one way of attempting to impose an authoritative prohibition upon all further inquiry. This is not the place to discuss Scripture, but it may without hesitation be affirmed that there is nothing there which tends to support such a doctrine, but much, on the contrary, leading us to regard the antecedent of the visible universe rather as something unseen than as something incomprehensible. It is perhaps possible that we are now fighting a shadow, and that no theologian will push his doctrine to this extremity. If this be the case, so much the better, for it is quite certain that no man of science will surrender his privilege of speculation because a class of theologians without any authority tell him to stop at a certain point.

But let us now come to the negative prejudice. Had the extreme scientific school remained content with asserting the freedom of inquiry against the doctrine now enunciated they would have been hailed as intellectual liberators, but they have done something far different from this. The extreme theologian built a wall by which he succeeded in shutting out the scientific position from his view altogether. Upon which the extreme scientist built another parallel wall by which he in his turn shut out all view of the theological position.

The atom, we are told by him, is the only true existence—it has come down to us from the eternity of the past, and it will continue to remain forever as it is. We presume this doctrine includes that of an eternal ether as well, without which it would be difficult to imagine a universe. Our readers will at once perceive that this hypothesis is precisely similar to that which accounted for the small shot by supposing that they had existed as they were from all eternity. There is absolutely no discoverable difference in principle between the two examples.

In truth the atom, no less than the world, is a collocation, and no theory will satisfy the intellect which deprives it of the privilege of speculating as to how this collocation was brought about. Already scientific theorists have begun to air these privileges and to devise hypotheses to account for the production of the atom, although, it must be owned, they have not met with much success. One of the most noteworthy of these attempts assumes the previous existence of a mathematically perfect fluid called ether, and supposes that atoms are vortex rings produced in this fluid, in which case it may be shown that they will have an eternal future when once produced—the task of their production will, however, be one of infinite difficulty. In other words, a sudden motion and one infinitely difficult of production, was, once upon a time, communicated to the ether, and vortex rings were then formed constituting the primordial atoms of the present system.

But this hypothesis, while free from the objection that it assigns to *material* or *stuff* an origin which causes intellectual confusion, is yet tarnished with a similar blemish as far as *motion* is concerned. It has already been shown that if shot or bricks were to start suddenly into existence out of nothing permanent perplexity would be produced; but a similar confusion would result were either of these, when once produced, to start off with a sudden and unexpected motion. For motion as truly as matter goes to constitute the universe, and, indeed, it is impossible to conceive of matter without motion.

Our proposition, that we must regard every material collocation as brought together in some way capable of being intellectually perceived, must therefore be supplemented by another which asserts that all motion of this collocation must have an

antecedent that is likewise capable of being intellectually grasped. We object, no doubt, to the old doctrine, because it maintained that the sun and the earth were created *out of nothing*; but we might object quite as strongly because it asserted that the sun was created *hot, with the earth moving round it in three hundred and sixty-five days*. We wish greatly to know how this heat and motion were brought about, and remain therefore quite unsatisfied by such a theory. Now, when the above speculation as to the origin of the atom is viewed in this light, it will be found to imply an inexplicable starting up in the ether of a strange kind of motion. For, of course, no one can dream of crediting the ether (as we know it) with inherent powers capable at a given epoch and all at once of producing this great manifestation after having remained quiescent throughout eternity.

In fine, it will be seen that we can only imagine such vortex rings to be produced by the Deity, who is thus supposed to create not matter but rather motion out of nothing—that is to say, with no antecedent capable of being intellectually perceived. We therefore object to this hypothesis quite as strongly as to the other, which told us that the matter of the universe was created out of nothing. We are thus led to regard the production of the visible universe as an event which had antecedents capable of being intellectually perceived, arising, in fact, out of a previous universe of some sort, but yet very different from the ether as we understand it. But we do not need to go back to the origin of visible things in order to arrive at this conclusion. The very same style of reasoning may be employed if we discuss, not the origin of things, but rather the motions and forces which animate these things.

Suppose, for instance, that we have a vessel filled with a large quantity of gas. This gas will tend to burst the vessel, and if it does not succeed in this it will at least cause a great pressure against the sides. We at once ask, Why does the gas produce this pressure? And this question has, in a great measure, been answered by the recent researches of Clerk-Maxwell and others. We learn from these that the particles of such a gas are very small in size, very many in number, and so moving as to be continually knocking against one another and against

the sides of the containing vessel—in truth, it is this bombardment which constitutes the pressure. Having established this hypothesis as far as its general features are concerned, science next inquires into the exact size and shape of these particles—their number in a cubic inch—their velocity of motion—and the law of the repulsive force, in virtue of which the particles are repelled when they come very near to each other or to the sides of the vessel. We cannot, perhaps, as yet, definitely reply to all these inquiries; but let us suppose that we can—that we are able to picture to ourselves the motions and changes of motion taking place amongst these particles of air. Have we then come at length to the boundary of the knowable, and is there nothing else to account for? By no means. Besides the old question of the origin of these particles, which we have already discussed, there is that of the origin of the repulsive force displayed when two particles come very near together. Why do these particles repel one another, and why should the law of this force be of that peculiar type which observation has established? The reader will thus perceive that we are carried forward to another order of things, not only when we contemplate the origin of the present system, but also when we study its method of working. This order of things is very different from the ether as we know it, and we may appropriately term it the unseen universe.

Now this unseen is certainly not something which changed itself once upon a time into the visible universe, and which has now no separate existence; but, on the contrary, it forms the inevitable goal towards which all scientific thought carries us forward, provided we leave ourselves thoroughly unfettered. It is not merely a past phase of things, but a very present reality, insomuch that the causes of all the changes of motion in the visible universe must be ultimately traced back to the unseen. And here I cannot refrain from quoting the remark once made to me by a distinguished naturalist, who likened the visible system to a series of views exhibited on a luminous screen by an unseen operator who stands behind. Each is perfect in its way, and the order of succession commends itself strongly to our intellect, and yet the operator remains invisible. We have thus arrived at the conclusion that the past origin and present

working of this visible system must be traced back to the unseen universe, but the important question still remains, "What sort of an unseen?"

Is it a mere dead universe or one replete with intelligence and life? Now we cannot, of course, reply to this question from scientific experience, but must be guided by some sort of analogy in our attempts to answer it. And it is here that the ultimate stand will be made by the materialistic school. They cannot help being driven to an unseen universe, but they may try to make it out to be utterly worthless as far as all purposes connected with immortality are concerned.

It behoves us then to argue this point calmly and with a judicial spirit, avoiding as well as we can all personal bias, looking upon the question, as it were, from without.

Let us, therefore, summon before us a living thing (a human being, if we please) and discuss his origin in the very manner in which we dealt with the small shot. When we examine his history we find that he was the offspring of parents similar to himself, from whom he was derived according to the well-understood process of descent. These parents were derived in the same way from their predecessors, and so on throughout at least a very long pedigree. But a pedigree, however long, must have a beginning quite apart from the vexed question of change of type, and we may be sure our ancestors had not made their appearance at the time when the earth was in process of condensation from a gaseous into a liquid mass. In fine, we have in some way or other to account for the introduction of life upon the earth. Now life and consciousness being incontestable verities, it would without doubt put the intellect to permanent confusion were we to regard them as having come suddenly into being at the very moment when the earth was ready for them and without any thinkable antecedent. It thus appears that we are driven to the unseen universe when we contemplate the life or subjective side of the present system, just as surely as when we contemplate its material realities. But an objection might be raised to this peculiar application of the principle of continuity. It might be argued that in the death of certain living beings, the lower animals for instance, there is a total disappearance of so much life and consciousness from

the universe, and, therefore, that we cannot apply the principle of continuity in contemplating either the advent or the disappearance of organized living things. Is this only an apparent or is it an absolute break-down?

Let us inquire into this by directing attention to some points in strictly physical science, in which the principle of continuity might appear at first sight to fail. For this purpose let us take a cylinder of soft iron and wrap it round with various convolutions of an insulated wire. It is well known that when an electric current is made to pass through this wire the soft iron cylinder will become a powerful magnet, and will perhaps sustain several hundred-weights. But as soon as the current is broken the iron will cease to manifest this peculiar property and will resume its previous neutral state. Here, then, we have two very puzzling phenomena to account for. The one is that this magnetic susceptibility is confined for the most part to iron or its compound steel, being apparently absent from the great majority of substances. The other is that a peculiar force seems here suddenly to emerge into being, and as suddenly to disappear. It would thus seem that certain qualities are possessed by certain kinds of matter, to the absolute exclusion of others, and also that these qualities are capable of being suddenly created and destroyed.

But when these phenomena are carefully scrutinized they assume a very different aspect. Faraday showed that some kind of magnetic susceptibility was a universal property of matter, and that while some bodies are more magnetic than the medium around them others are less so. And Ampère proposed an hypothesis which accounts very well for the magnetic peculiarities of soft iron. He assumed the existence of what may be called molecular currents—that is to say, of currents continually circulating round the various particles of the iron, in which case the act of the exciting current will consist in turning all these small molecular currents so as to act together. But owing to the absence of retentive force in these particles, as soon as the chief current ceases, the small currents will at once resume their original *higgledy-piggledy state*, lying together in a confused mass without any order or definite tendency in any direction. Here, then, the apparent creation and annihilation of something is re-

duced to an orderly and disorderly action of something which always remains.

The extreme scientific school have applied reasoning very similar to this to account for the origin and disappearance of individual life. According to them, that which always exists is the atom, and this atom is in some very simple sense alive. Its mode of life, however, is so extremely simple as to be quite incomprehensible to us. Now, when these atoms go to form the body of a living being, it is assumed that their numerous simple lives, acting together, merge into one complex individuality, just as the various molecular currents when under the exciting influence of the great current merge into one magnet. And at death we have results very similar to those which follow the breaking of the magnetizing current, and the single conscious existence is at once reduced to an enormous swarm of atomic lives, each acting at random and entirely by itself, until, perhaps, some of them are called on to minister to some other conscious existence in the shape of food. Here, then, at last, we have the extreme materialistic hypothesis which is sometimes held with, and sometimes without, the belief in a Deity. In the former case these atoms are at least entitled to be called the sons of God, while in the latter they will take the place of Deity Himself.

The true life of the eternally-existent universe is thus presumed to centre in the atom, which is the only thing absolutely immortal. Now whatever may be said against this hypothesis (and we shall speedily show that it is untenable) it certainly possesses the merit of apparently overcoming the difficulty presented by the appearance and disappearance of life.

Before proceeding further let us here inquire whether the Christian scheme presents us with any alternative hypothesis capable of meeting this obvious difficulty. It is hardly necessary to say that it does. In this system, just as truly as in that of the materialists, there is an immortality resident in the universe ; not, however, that of myriads of living atoms, but rather that of a personal Ruler, eternal, immortal, invisible, "by whom are all things, for whom are all things," and in whom we live and move and have our being. It has been well said by a writer

in this Review¹ that the person and character of God is the underlying reality of the universe, according to the Christian system.

The visible universe may give place to the unseen, nay, one order of the unseen may give place to another and a higher order (as far as mere conditioning is concerned); but above all and through all we have the unchanging character of God Himself. And if this Christian doctrine be coupled with that which claims a past eternity for the universe, we perceive through the vista of this past eternity a divine hierarchy, at the head of which stands the Son of God, bearing down upon us and receiving those who are faithful into its ranks, in which when once received the individual will continue to develop throughout a future eternity according to the laws of a true development.

Some men may doubtless consider this a very incomprehensible theory, but to these we shall only reply that to our thinking it is not one whit more incomprehensible than that of the immortal atom; besides which it has probably the advantage of satisfying our moral and spiritual nature somewhat better than the materialistic hypothesis; this, however, is a digression. Our first point, now that we have the two systems fairly before us, will be to insist upon a modification of the materialistic hypothesis. We have already shown that in our attempts to account for the production of the visible universe we are carried forward into the unseen. Clearly, then, the life of the present system, as well as its substance and power, must be traced back to this order of things. The so-called immortal atom is thus rendered no longer immortal, for all the properties which it possesses, including its simple life, must have been derived from a very different antecedent. It is difficult to imagine that there can be any contention about this point. Life must have existed in the unseen, because the life of the visible universe has come from thence, and the only possible question is about the rank of this life.

This is the point which we must now investigate, and our only possible means of doing so is to examine those occasions when the unseen came perceptibly into contact with us, and see

¹ Article entitled "Faith," by Mark Hopkins, Sept. 1878.

whether they afford us any evidence on the subject. We have agreed in the mean time to leave revelation alone. Now there are two such occasions. Clearly the unseen must have come into contact with us when developing the substance or material of the present system—clearly, also, when developing its life. Let us take these in the order now given, and ask, first, whether the production of the substance of visible things affords us any intimation regarding the rank of life resident in the unseen. Now the production of myriads of atoms may be compared to that of myriads of small shot. This likeness is so evident that atoms have been characterized by Herschel and Maxwell as manufactured articles. If so, they must, consistently with the principle of continuity, have been produced by an intelligent agent residing in the unseen and designing uniformity of product. It is contrary to all analogy to suppose that a *practically* dead universe (of course, no universe *on any scheme* can be *really* dead), after remaining quiescent through endless ages, should, in virtue of certain powers with which it was endowed, have abruptly commenced action, and after generating the present system have stopped work as suddenly as it began; and yet this is the only alternative to the other hypothesis.

If it be asked what evidence have we of the existence in the unseen of an intelligence of this supreme power, we may reply by asking what evidence have we that the unseen is practically devoid of all intelligence? Is not the one as much an hypothesis as the other, and is there any other possible method of procedure, if we speculate on such subjects at all, than to begin by confessing our ignorance of the rank of life in the unseen, and submit to be guided solely by a consideration of those points at which it has come into contact with the present system? And having done this, so far as substance is concerned, we must unhesitatingly pronounce the act of its production to disclose, by analogy, an Unseen replete with intelligence and power.

Let us next consider that occasion when the unseen communicated the principle of life to the visible order of things. Now here at the very outset the materialist will raise an objection, and tell us that the life of the present system was contemporaneous with its production. He will allege that the life of the unseen was even of a simpler order than that of the atom,

and that when the substance of the atom was developed its extremely simple life was developed along with it.

In the course of ages, he will go on to state, certain groupings of these atoms would, no doubt, take place, in which the principle of individual life would receive a fuller development, and if these groupings were at the same time capable of reproduction, we should thus arrive at the first advent of perceptible life. Things would thereafter follow the well-known course of evolution, so ably described by Wallace and Darwin.¹ Now there is one sufficient reply to this imaginary hypothesis. It is the assertion of the law of biogenesis. As a matter of scientific experience we know that an organized living thing will only spring from a living antecedent. Of course our opponents may say it is impossible to tell what may *not* have taken place during the long ages through which the world has developed into its present state. To this we should at once reply: Why then insist upon the breaking of a well-known law? Is there the smallest necessity for this procedure? If we had here any thing like a true dilemma, upon one of the horns of which either the law of biogenesis or some other principle of equal importance must inevitably be sacrificed, we should have, of course, to consider our position and make our choice. But there is absolutely no such necessity. We have not even to invent a new hypothesis in order to get rid of our difficulty. For there are independent reasons, such as those already brought before the reader, for attributing the production of the visible world to an Unseen replete with intelligence and power, and in order to get rid of our present difficulty we have only to look to this quarter for the origin of life, since an intelligent Unseen capable of producing the visible order may surely be imagined competent to perform the office of endowing it with life.

Before dismissing this branch of our inquiry it may be well to notice one other objection that may be raised to the supra-sensual origin of things. It may be said to us: The process of construction of the visible universe cannot, on your theory, be termed a physical process, for since energy implies matter—before the production of the atom—the laws of energy (as we understand them) cannot possibly have existed. Thus, by your

¹ See "Paradoxical Philosophy," a sequel to the "Unseen Universe."

theory, you break the laws of energy ; why then do you object to us if we break the law of biogenesis? In reply to this the writer may state that he has been kindly warned by a philosophical friend not to make too extensive a use of the word "*physical*," since all that is required is a thinkable antecedent to the visible system, not a physical antecedent. This is, no doubt, quite true. Unquestionably the principle of continuity drives us to seek for a thinkable origin of the present system, just as it drives us to seek for a thinkable cause of universal gravitation.

It is, of course, necessary that the one antecedent should precede the formation of mass, and thus appear to contradict the laws of energy, and also that the other should introduce a state of things devoid of gravitation. But here the intellect, so far from being put to confusion, drives us to demand such an origin for a system, which cannot be regarded as eternal or self-produced. Our opponents, however, cling to the present system, and decline to be led to any other. They profess to be guided entirely by experience. We should therefore like to know in what possible way scientific experience can lead them to assert that *under somewhat different conditions, still, however, physical*, the principle of biogenesis has been broken. Surely their true position is to confess their inability to explain through known laws the first production of life, and to lend at least an open ear to any theory which comes before them professing to account for what they themselves are unable to explain.

We have now been endeavoring to show that there is no more necessity for imagining a breach of the law of biogenesis than of the law of energy. The principle of continuity no doubt drives us to contemplate an order of things prior to the establishment of either of these laws. But when once the present system was fairly in working order and (if we may be allowed the expression) left very much to itself, why should we imagine that one of its powers has so materially altered as to have been at one time quite capable of performing a task which is fundamentally opposed to all present experience? And surely of all distinctions which come before us in nature, there is none greater than that between the living and the dead. We are

thus led to the conclusion that the substance of this universe indicates by analogy the operation of an intelligent unseen, and that our life development is due to the same agency, though not to the same act, since it would break the law of biogenesis to suppose that the forces of matter, so far as we know them, are competent of themselves to originate life. Thus the production of life, no less than that of substance, indicates the existence of an intelligent unseen. The same thought seems to have occurred to Jean Paul Richter, who says: "At least two miracles or revelations remain for you uncontested in this age, which deadens sound with unreverberating material. They resemble an Old and New Testament, and are these: the birth of Finite Being, and the birth of life within the hard wood of matter."

If we regard this question from another point of view we are led to the same conclusion. It is a favorite employment with evolutionists to draw an analogy between the life-progress of the individual and that of the world, and to liken the development of the former, from the germ to birth, through stages of increasing complexity of structure, to the life development of the world, from its rudimentary beginning to the present time. Well, let us by all means accept of this analogy, but insist upon its being carried fully out. When this is done it will lead us in quite another than a materialistic direction. For what have we in the individual?¹ We have, first of all, a descent from a parent or progenitor, and after that a life ascent of the individual, consisting of two stages, the one from the germ to birth, and the other from birth to maturity. And if a complete comparison is to be made between the individual and the world, we must have a descent of the world's life from its source in the unseen as well as the ascending development with which we are here acquainted. Nor can we well imagine the rank of the unseen, life which has communicated this germ to be greatly inferior to the rank which the germ itself has attained in the course of its life history. To do so would be contrary to all analogy, and indeed to imagine an unseen containing nothing but a rudimentary form of life throughout a past eternity, to have suddenly communicated a germ of life to the visible universe which

¹ "Paradoxical Philosophy," page 110.

ultimately developed into man, is quite an untenable hypothesis. Furthermore, a writer on evolution, in the *Church Quarterly Review* (July, 1878), in discussing this analogy, has made the remark that just as we have two stages in the life ascent of the individual—one from the germ to birth, and the other from birth to maturity—so we may have two corresponding stages in the life-history of the world. And just as the laws regulating development before birth are very different from those which regulate it after birth, so it may be with the world. We may have here, also, two stages, of which the present corresponds to the one after birth, and hence it may be very difficult from a study of the present life-laws of the world to gain any thing like a complete account of the earlier stage of its life development.

If we now endeavor to sum up the result of this discussion we shall see that it first of all leads us to an unseen world as the origin of the present system, and then brings before us various reasons and analogies for supposing this unseen to be replete with intelligence and power. Nor can it be doubted that the conception of a practically dead unseen coming down upon us through a past eternity is philosophically absurd. This, then, is the scientific argument, and it is both destructive and constructive. Destructive inasmuch as it exhibits the fallacy of the materialistic position, and constructive inasmuch as it affords evidence for believing the unseen to be replete with intelligence and power. What we have done has been to reveal the probable existence of a state of things consistent with the doctrine of the soul's immortality, while demolishing the arguments in favor of a scheme of things inconsistent with this doctrine. We have shown the probability of a state into which the soul of man may be received at death, but we cannot assert that provision has actually been made in those regions for its reception. Nor is physical science able to accomplish this task, which is one that must be handed over to the moral philosopher and the theologian. If the former of these can prove that to deny the doctrine of immortality would bring confusion to the moral and spiritual nature of man, he has gained his point; and if the latter can produce evidence to show that this Spiritual Unseen has entered into communication with the human

race upon this momentous question, he has gained his point in like manner. But neither of these is akin to the argument of this article, the writer of which has agreed to confine himself entirely to the scientific aspects of the question.

It will be noticed that nothing has here been said about a personal God existing in and ruling over the universe, and it has been left to the reader to deduce by implication this doctrine for himself. But it will be quite apparent that the train of reasoning we have employed disposes of all objection to this doctrine, which forms in truth the natural cope-stone and crown of a spiritual system. Quite recently the realistic assumptions of modern science have been examined and discussed by Thomas Martin Herbert¹ in a very able volume, and amongst other things the author shows that any train of reasoning directed against the doctrine of a personal God will dispose at the same time of all intelligence whatever.

"It is clear," says this author, "that the same arguments which banish design from external nature, by showing that physical causes are adequate to account for its supposed productions, exclude all the evidences of human intelligence, and compel us to believe that every work of man is also solely the effect of physical causes. In other words, if we hold that the natural course of events admits of any interference by intelligence, we leave room for the purposive interpositions of the Creator, as well as for those of man; but if we maintain that it would contradict all our experience of nature to suppose that the Creator steps in to alter its course, we must not concede to the mind of man the slightest power to modify events. . . . To evade the full force of this conclusion by calling men *conscious* automata, has been shown to be scientifically unjustifiable. . . . It is commonly supposed that physical science tends to banish divine intelligence from the universe, and to exalt the achievements of the mind of man. But, in fact, the very conclusion of science which denies divine interference with the course of events, reduces the human intellect to an absolute cipher, and lays all its fancied triumphs at the feet of the Creator, along with the other marvels of nature, great and small, unless the Creator himself be denied, and then intelligence is banished from the universe altogether."

Before concluding this article we may notice one or two objections that have been raised by theologians. It has been asserted that the doctrine of a universe extending throughout a

¹ "The Realistic Assumptions of Modern Science Examined." By Thomas Martin Herbert; M.A., late Professor of Church History and Philosophy in the Lancashire Independent College, Manchester.

past eternity deprives God of His attribute as a Creator. To this it may be replied, that the division of God's attributes into those of Creator and Upholder of the Universe is merely one that accommodates itself to our ordinary habits of thought. And surely the carriage of both into a past eternity can hardly be said to be the means of getting rid of one of them. The more philosophical of the materialists find it necessary to assume the existence of a Creator, while they yet believe the universe to be eternal. Nor does the theologian ever imagine that he does away with the relations between the persons of the Trinity by carrying back these relations into the depths of a past eternity. It cannot, therefore, be truly asserted that by carrying back the universe into the eternity of the past we in any sense do away with one of the attributes of God.

Again objection has been raised to the feeling of unrest that would be produced if we were to be carried forward from universe unto universe, as the principle of continuity would seem to demand. And unquestionably some of the most touching passages in Scripture tell us of "the rest that remaineth for the people of God," and to one who is weary and buffeted with the storms of this life it must be very soothing to contemplate a state of perfect repose.

"To die ; to sleep ;
No more ; and by a sleep to say we end
The heart-ache and the thousand natural shocks
That flesh is heir to?—'tis a consummation
Devoutly to be wished."

But is there any thing that really militates against this view in that ascending progress which is certainly not peculiar to these speculations, but is demanded alike by all Christian theories of immortality? The heaven of the good is not a place of inglorious ease either for the moral or the intellectual nature. But if the intellect is to develop throughout the future there must be opened up to it a limitless avenue along which it may travel with delight. And is this not furnished to it by that theory which tells us that the scientific complexity of the universe is practically infinite—asserts, in fact, the impossibility of our ever getting to the bottom of things? Why have we at present some sort of conflict with scientific men? Simply be-

cause certain of these have imagined that they have at length pierced to the ultimate boundary of things. They have reduced every thing to the atom and to mechanical force, and have left no room for spontaneous intelligence or moral free-will. Would it be presumptuous to assert that a similar result is inevitable *either in this or in any other state*, whenever a finite intelligence imagines that he has at length arrived at the ultimate scientific basis of things? We think not; for it is self-evident that any whole system of things which can be scientifically grasped by the intellect of the individual must dispose at once of his free-will, since, if it did not, an arbitrary factor would thus be introduced which would render the system incomplete. In fine, the individual must be regarded as a mystery above and beyond all scientific research. He is one who works at the end of an infinite avenue, to whom communications are carried from the outer world, each involving an infinite number of steps, and from whom communications of a similar nature come in return into the outer world once more. Science has already made some progress along this avenue, and will unquestionably make greater, but she will never reach the end. The inviolable citadel which enshrines the individual will never be reached. To trace a few steps along the pathway is the work of the finite intelligence, but to know the mystery of the individual is the problem of God.

BALFOUR STEWART.

THE FINAL PHILOSOPHY.

DR. SHIELDS is a philosopher by taste and an apologist by profession. Admirably qualified for acting in either capacity, he has undertaken to fill both offices at once, and this is the secret of the great excellences and the grave errors of his recent work. Philosophy and apologetics are not coextensive, and any attempt to make them so must end in unduly circumscribing the area of the former or in exaggerating the importance of the latter. "The Final Philosophy" will, in all probability, be misjudged by two classes of readers: some will undervalue it through dislike of what they will regard as the Utopian features of the book; and some will overpraise it as a bold and brave attempt to find a permanent basis for the reconciliation of Science and Religion. The fact is, however, that the writer is nowhere so strong as at the close of his volume, and nowhere so weak as at the beginning: as a philosopher Dr. Shields merits high praise, but as an apologist he is open to serious criticism. His book is written with great ability; it gives evidence on every page of wide reading and rare power of generalization; it fully sustains the author's reputation as a religious philosopher, and though it contains some statements which ought not to pass unchallenged, it is a credit to American authorship and to the institution whence it goes out into the world. It belongs to what Zöckler calls "conflict-literature." The author makes very liberal use of military language, and the picture of a battle scene opens nearly every chapter in the volume. Religion is represented as engaged in a hot contest with science and exposed to the varying fortunes of war. No objection can be made to this feature of the volume, which does

apply equally well to conflict-literature in general; but the habit of discussing apologetical subjects in vague and general terms instead of under the limitations of strict propositional statements is enough to make one concur with Dr. Whedon in the opinion that "the conflict-and-reconciliation business" has been largely overdone.

Science and Religion, Science and Christianity, Science and the Bible—these are three distinct subjects, demanding distinct and separate treatment, and only confusion can arise from a failure to recognize this fact. It does not follow that a man denies the divine origin of Christianity because he does not believe in the plenary inspiration of the Bible. This ought to be more fully appreciated and more candidly stated than it usually is, for the comfort of Christians who live in a state of chronic alarm, and who fear that the very life of the Gospel is threatened every time that an attack is made upon some fact of Scripture. Defend plenary inspiration by all means, but at the same time let it be distinctly understood that the pearl of great price is in safe custody, and that something besides the outer door of inspiration lies between it and the grasp of the infidel. Nor does it necessarily follow that the man who denies the divine origin of Christianity would have any controversy with theists respecting the Being of God or the Immortality of the Soul; and it is a great blunder to represent all the varying divergencies from strict orthodoxy as equally and alike illustrating the great conflict between science and religion. An examination of Dr. Shields' volume suggests several minor points of criticism. His failure to distinguish between the three topics just named is one. Then we look in vain for any analytical investigation of the essential relations which science and religion sustain to each other, or for any reply to those who assert or assume that this relationship is one of necessary antagonism. Dr. Shields maintains that this relationship of antagonism is not normal and will not be perpetual, and the way was open for him to have replied to those whose reasonings assume or tend to the very opposite idea. The difference between science and religion does not, as the authors of the "Unseen Universe" seem to teach, resolve itself into a difference between the questions *How?* and *Why?* For men of religion as well as men of sci-

ence ask the former question, and men of science have no good reason for not asking the latter. Ridicule teleology as they may, men of science have yet to show that it is any more unscientific to say that the eye was made to see with than to say that the telescope was made to see through. Nor is there any schism between science and religion because the heavens declare the glory of God, but not his Fatherhood. Mr. Gibson might as well say that there is a schism between two members of the human body because the eye does not hear and the ear does not see, as to say that there is a schism between science and religion because the one does not teach what the other does. Dr. Winchell has rewritten the history of thought in order to support the opinion that there is a natural and irreconcilable antagonism between intellect and faith, and that this is the explanation of the conflict of science and religion. But how so? Men believe, yet intellect furnishes the reasons for their faith; and men reason, yet their conclusions are often expressed in the terms of faith. Herbert Spencer has also tried to find by analysis the reason for the conflict between science and religion. But he loses religion in the process of experiment. His investigations lead him to the belief that there are two theories of the universe—the *à priori* and the *à posteriori*: so there may be, and two rival philosophies may grow out of them; but to identify religion with an *à priori* theory of the universe is transparently absurd. The attempt to find the origin of the schism between science and religion has failed simply because such a schism does not exist. Individual thinkers can be found who, being scientific men, hold anti-religious opinions. They deny, or at least they do not believe in, the existence of a personal God, and a perdurable personal self; and it is not uncommon for such men to propose terms of reconciliation between science and religion; but it should not be a difficult thing to know how to treat their propositions. Herbert Spencer, for example, has drafted a treaty of peace in substance as follows: Science will admit that there is a Power that transcends experience, and Religion must admit that this Power is unknowable. Science is to be allowed undisputed rule within the sphere of the knowable; Religion is to surrender all claim to the territory occupied by science, and

in consideration of her accommodating nescience is to be treated with great respect and protected in the exercise of her sovereign rights throughout the length and breadth of Don't-know-dom. What Mr. Spencer proposes to accomplish by a division of territory Mr. Frederick Harrison hopes to effect by means of a partnership. He proposes that science shall give religion a share in the kingdom of this world on the express condition that religion will abandon all hope of a world to come. What shall be said to these proposals? The answer is not difficult. Can an atheist worship? Can he pray? Need he have any sense of responsibility? any belief in the immutable distinctions of right and wrong? In any true sense of the word, can he be religious? No? Then there can be no reconciliation of science and religion on such terms as these. These writers would take from religion what feeds it, what it leans upon, what gives it power, and then say they have no quarrel with it. *Solitudinem faciunt pacem appellant.*

Again, it is asked whether there is a conflict between science and Christianity. What is Christianity? Reduced to its lowest terms it is theism *plus* the Incarnation. There are those of course who reject Christianity because it teaches men to believe that Christ wrought miracles, and particularly that he rose from the dead. If such men claim to speak in the name of science, it is clear that the only way of reconciling science and Christianity is by proving that science is wrong in making opposition to the Christian miracles. But it is better to let men speak only for themselves; and the question is whether it is possible to effect an adjustment of the differences between those who do and those who do not believe in the occurrence of the Christian miracles. An unqualified negative is the only proper answer to this inquiry. To give up miracles is to give up the Gospel. Christianity without the miracles would have some value, to be sure; so perhaps had the ground in which the treasure was hid some value for agricultural purposes; but it was not on that account that the man in the parable sold all that he had and bought it. With the treasure in it, it was cheap at the price he paid for it; but as a farm it was no bargain. And the market-value of Christianity, in comparison with other religions, depends upon the presence in it of miraculous

elements. Give up the resurrection of Christ, and then "I care for nothing; all shall go." Discard miracles, and you may give the religion of Christ to some ragman of literature with other cast-off faiths: he perhaps will make an essay on comparative theology out of it; as a religion it is worthless. And it is easy to see what our line of defence must be. Miracles are denied, we are told, because men are so fully convinced of the uniformity of nature. But what is the uniformity of nature? An *à priori* expectation, nothing more, as Mozley and Bowen have so ably shown, that the future will be like the past. Expectations, however, are not always realized; and no one denies a fact which he sees because it was unexpected. Will he deny a fact of which he is credibly informed because it was unexpected? Will testimony prove a fact? Then it will prove an unexpected and extraordinary fact. It is not difficult to believe in miracles if one believes in God. This is substantially Paley's position. But it is not necessary to believe in God in order to believe in miracles, though many think so, and among them, apparently, Mr. Venn. But why should belief in God condition belief in the occurrence of an event in the external world? That it occurs is a matter of evidence; what brought it about is another matter. Hence it is possible to argue: God is, therefore miracles may be; and: Miracles are, therefore God must be. The last word has not yet been said on the subject of certitude; but of this we may be sure: there will be an exposure of the illogical position which a man occupies who says that testimony is to be believed except when it relates to the supernatural, and then the sharp antithesis will be between the truth of Christianity and the general discredit of history. A book which will discuss, with the ability which such a subject requires, the philosophy of human testimony, and defend the miraculous in Christianity without making an argument for superstition or opening the door to credulity, is a desideratum in theological literature.

What now is meant by saying that there is a conflict between science and the Bible? Simply this: The Bible, as it is commonly understood, presents a view of the universe differing in various particulars from the views entertained by some who regard the universe from the exclusive standpoint of

observation and experience. The question is, whether the Bible has been misunderstood, or is in error, or whether those who oppose its teachings are mistaken. The reply to these questions does not appear to involve any great scheme for the reconciliation of science and religion, as so many suppose, nor is there any reason why the particular proposition, "some men, etc.," should be changed into the universal proposition, "all men, etc.," by the fallacious device of personifying science and writing it with a capital S. But granting that there is a conflict between science and the Bible, it is evident that one's opinion respecting the area which it covers will depend, in a measure, upon the importance which he chooses to attach to certain so-called scientific hypotheses. If everybody who has an anti-scriptural hypothesis in his head is to be taken notice of, it will be easy to prove that every question is an open question, and that the whole Bible, alike as to its contents and its credentials, is the subject of a direct assault on the part of science. Dr. Shields has made this mistake; and the impression which his book is likely to produce upon the mind of a reader will be that every article of faith is involved in the conflict between science and religion. On a matter of as much moment as this, however, Dr. Shields should be allowed to speak for himself. The following are his words :

"Despite our general belief that all religious truths and scientific facts will be found accordant, yet at present there is no doctrine which is not staked in some theory, and no theory which is not staked in some doctrine. If we hold the one we must let go the other, while if we give up either we may lose both. What becomes of our theory of the heavens if we hold that the worlds were commanded full-born from nothing? and yet, if we hold that they have been slowly evolved from nebulae, where is our doctrine of creation? What becomes of our theory of the earth if we hold that it was made in six days of twenty-four hours? and yet, if we hold that it has been developed through unmeasured time, where is our doctrine of the Sabbath? What becomes of our theory of races if we hold that they descended from Adam and Eve? and yet, if we hold that they sprang from indigenous centres, where is our doctrine of the divine image and the fall of man? What becomes of our theory of the soul if we hold that it is independent of the body; and yet, if we hold that it is interwoven with the body, where is our doctrine of immortality and the resurrection? What becomes of our theory of society if we hold that the millennium will be sudden and miraculous? and yet, if we hold that it will be historical and natural, where is our doc-

trine of the second coming and judgment of Christ? What becomes of our whole theory of religion if we hold to a special and supernatural revelation? and yet, if we hold to one that is natural and universal, where are all the distinctive doctrines of Christianity? Whatsoever we may hold in religion is so adventured with whatsoever we may hold in science as to put in peril the very life of truth and virtue."

Dr. Shields is minutely and extensively acquainted with the history of opinion, and with the present drifts and tendencies of thought. He seems to have no difficulty in assigning every man to his proper place in a classification, and his thorough knowledge of individual thinkers contributes greatly to the value of his generalizations. Nowhere does he exhibit more completely his thorough mastery of the materials pertaining to his department than in the chapters in which he gives an account of the attitudes of thinkers of the present and of former times in relation to the questions debated between science and religion. Yet his love of logical completeness, his fondness for antithesis, his desire to have a sustained thought throughout the merit of his book, have proved in some instances an injury to his argument, and have given his book the appearance, now and then, of a ledger-account, where the figures are made to balance by putting amounts arbitrarily into the columns. Still nothing can be neater than his classification of parties in reference to the relations they sustain to the religious problems which are the subject of debate :

"Of such parties the two most marked are those who are averse and those who are inapt to the great work of harmonizing the knowledge of man with the knowledge of God; and these parties are again subdivisible according to the kind and degree of such aversion or unfitness. So that as we proceed four distinct classes will emerge into view, in the order in which we name them : 1st, The Extremists, who would render science and religion hostile and exterminant ; 2d, The Indifferentists, who would have them separate and independent ; 3d, The Impatients or Eclectics, who would combine them prematurely and illogically ; 4th, The Despondents or Sceptics, who would abandon them as contradictory or irreconcilable."

The reader must turn to the pages of Dr. Shields to see how many men are placed in one or another of these four classes. It is not necessary to ask whether he has fairly represented all to whom he refers or whether he has stated correctly all the facts which he has adduced. In a book where so many names are

cited and so many facts are referred to, it would be strange if a mind with microscopic tastes could not discover some error. There is, however, a more important question to ask, and it involves one of the principal points of criticism to which this able book is exposed. What is the logical conclusion to which, if Dr. Shields is correct, the student of the Bible is driven?

For the general terms science and religion substitute the specific terms hypotheses and dogmas; for it is between these that the conflict exists. Every hypothesis is staked in some doctrine. No one believes that science and religion, in the broad sense of those terms, are hostile or exterminant, and no one can help believing that in that same broad sense they are independent. The ideas of hostility, independence, premature combination, or hopeless separation, refer to rival hypotheses and dogmas. Notice again that the several hypotheses and dogmas are not distributed among these four classes, the Extremists dealing with some, the Indifferentists with others, etc. But each of the four deals with all the problems of astronomy, geology, anthropology, etc., so that if the four classes above named be represented by the large letters of the alphabet, and the rival hypotheses and dogmas by the small letters, the leading chapters in the first part of the "Final Philosophy" will appear to be constructed according to a very simple arrangement, thus: *A a, b, c, d; B a, b, c, d; C a, b, c, d; D a, b, c, d.* What is true, then, of any one hypothesis and dogma is true of all, and the author, it will be remembered, condemns the attitude assumed by each of the four classes in reference to the problems in debate between science and religion. Suppose, then, that the doctrine in question is that of creation as opposed to the hypothesis of evolution. A Christian says, "I am an Extremist; I shall oppose the hypothesis." But our author says, this will not do. "I will be an Indifferentist, then, holding the dogma, but ignoring the hypothesis." Again, the writer says, this is not philosophical. "Then I will combine the hypothesis and the dogma, and this will place me among the Eclectics." But our author would say that efforts of this sort are premature. Finally the Christian says, "I will give up the doctrine, for I see no way of reconciling it with the hypothesis." But this proposition is open to

objection with all the rest. What, then, should he do? He must not attack the hypothesis; he must not hold the dogma; he must not combine the hypothesis and the dogma; he must not give up the dogma. Is it possible to conceive of a condition of more unqualified scepticism than that in which this unfortunate inquirer would be left? And when it is remembered that the rival hypotheses and dogmas cover the whole field of revealed religion and embrace even the question whether a revealed religion is possible, it is safe to say that Dr. Shields has made the strongest plea for an agnostic theology which has been presented to the English-speaking world in the present generation. It is true that the author looks without alarm upon the failure of former schemes of reconciliation, because he has confidence in the umpirage of philosophy. His reasoning may have the effect of shutting men up to the necessity of invoking the aid of the Final Philosophy if they would save themselves from a state of nescience; but other men may not be as sanguine as he is respecting the final philosophy.

As it is so easy to be misunderstood, the writer of this article is at pains to say that his criticism concerns the logic of the book and not the attitude of its author. Dr. Shields has expressed in a single sentence what he believes, and all devout students of the Bible will agree with him. "Religious creeds and scientific theories," he says, "come into actual conflict not because of any actual disagreement between the facts of nature and the truths of Scripture, but solely because of some false exegesis on the one side or some wrong induction on the other." This, however, is a belief which the author entertains in spite of his argument, and if his argument is sound his belief has no good reason for its existence; for a supernatural revelation is one of the dogmas which stand opposed to scientific hypotheses, and it is one which, according to the author's specific averment, cannot be regarded as settled. The Eclectic's method of reconciling science and religion is premature and illogical, he says,

"for we are only in the first stages of the great reconciliation. Fiercer strifes may await us in the more undeveloped sciences than any we have survived. If astronomy could make such warfare, at the mere outposts of revelation, when it dwarfed the earth into an atom in space; if geology, at

the walls of the fortress, strikes such a panic now that it threatens to reduce man to an ephemeron in time ; and if anthropology is actually jarring the foundations with its effort to degrade him to an autochthon in the scale of being ; what may we expect when at length the citadel is assailed by those mental and moral sciences which, having human nature for their subject, and involving all the great questions of human duty and destiny, shall impinge upon the most peculiar topics of inspiration, upon the actual contents as well as credentials of the heavenly message ?”

We are to look, then, for greater objections to the Bible from the mental and moral sciences than any that geology and astronomy have offered. Yet Dr. Shields speaks in terms which fall little short of ridicule of those who ignore or reject the astronomical and geological objections, or who even undertake, during the present phase of the controversy, to form a definite opinion by combining the scientific hypotheses and religious dogmas. How is it that he can justify his own confidence in the Bible when even greater attacks are to be made against its credentials than as yet have been made against its contents ? How does he manage to go into theological bankruptcy with a snug fortune hid away in the doctrine of inspiration ? What will he do ? Will he accept the logic of his book and avow agnosticism ? or will he hold the inconsistent position of believing what his argument goes to show he has no right to believe ? This would be the Hamiltonian philosophy over again, of preaching the faith which he had first destroyed. History, however, teaches us that an author’s faith is no protection against the mischief which his logic may do. Mansel’s piety did not prevent his Bampton Lectures from being quoted in support of anti-theistic doctrine ; and if the “ Final Philosophy ” does not share the fate of the “ Limits of Religious Thought,” it will be because there is on this side of the water no Herbert Spencer with wit enough to capture this piece of artillery and turn it against the citadel of Christianity.

What, then, is the author’s method of effecting a reconciliation between science and religion ? Briefly stated, it is the “ umpirage of philosophy.” What that is it may not be so easy to say, but the following passage throws some light upon the subject :

"The position taken in the last chapter is that the numerous unsolved problems now in debate between scientists and religionists are neither purely scientific nor merely religious, but properly philosophical questions, to be kept within the province of philosophical minds, and to be wrought as fast as they are settled into the ultimate philosophical system. We cannot decide them as mere theologians, appealing to Scripture alone; we cannot decide them as mere scientists, appealing to nature alone; we can only decide them as philosophers, lovers of all knowledge and truth, embracing both nature and Scripture in our view, sifting the evidence brought by their respective disciples, and then basing our conclusions upon that evidence, even though it should be against our previous opinions and wishes. This was also expressed in a more figurative manner by personifying the opposing interests of science and religion, and representing philosophy as an umpire between them; not any individual philosopher between any individual scientist and religionist; nor yet any particular system of philosophy to which both might appeal as a standard; but simply that philosophic mind, genius, or spirit which in the whole race of true philosophers has ever sought, and still seeks, with more or less thoroughness and success, to mediate between conflicting sects and schools, to distinguish their truths from their errors, and to derive from them the final system of perfect knowledge."

1. Does the umpirage of philosophy mean the arbitration of philosophers? If so, it is open to the four objections which I made three years ago when the chapter entitled "The Umpirage of Philosophy" was published as a memoir read before the Philosophical Society at Washington. These objections, with the author's replies, are to be found at the close of the first chapter of the second part of the volume. The first of those objections was that the philosopher is supposed to approach the subject with the foregone conclusion that the Bible is true, in which case the arbitration proceeds by begging the gravest question now before the world. The author meets this objection by saying that "the only parties that can be supposed to need or accept reconciliation are the scientist and the religionist, not the atheist and the theologian, not the infidel and the Christian, who could never agree and preserve their distinctive characters." But this does not harmonize with a statement in the same chapter, where it is said that among the problems upon which the umpirage of philosophy is to be tried we have "as the issue of modern metaphysical thought, at the one extreme, an optimism which seeks to identify the revealed Jehovah as the one absolute Reason, the first and final cause of a perfected creation;

and at the other extreme a pessimism which would exhibit the developing universe as an abortive paradox beginning and ending in hopeless contradiction." The only answer which can be made to these four objections is that the umpirage of philosophy has no reference to a specific class of men called philosophers, and this the author makes. He would probably agree with Sir George Cornewall Lewis in the remark that "whatever deference is justly due to great names and competent judges, they are not to be regarded as infallible—as the oracles of a scientific religion, or as courts of philosophy without appeal."

2. Does the "umpirage of philosophy" mean the exhibition of a philosophic spirit? This seems to be the author's meaning in the passage cited above, and no exception can be taken to it. It is certain, for instance, that neither Genesis nor Geology is the only source of information regarding the cosmogony; that access to a Hebrew Bible is not enough, and access to a geological cabinet is not enough; but that the truth must be sought by a full, fair, and patient study of all the evidence in the case, whether that evidence be found in Semitic roots or Silurian rocks. But if this is all that the author means he is only giving a new name to a very old idea in speaking of the umpirage of philosophy. And if this is what he means there is no good reason for objecting to the theological geologists or the geological theologians who undertake to show the exegetical bearing of geology on Genesis. Such efforts are declared to be premature, however, and it is intimated that no definite and final conclusions can be looked for until a broad, comprehensive, and summative science is projected which shall proceed upon a logical organization throughout all the sciences.

3. Is it then the final philosophy which is to be the umpire? This view of the matter would be in keeping with the general drift of the discussion; but as the final philosophy has not yet made its appearance, it would follow that the problems with which it is to deal are open questions, and may so remain for many a day. In other words, if this is what the umpirage of philosophy means, agnosticism is the only position open to any man who would not be an infidel or a bigot.

Enough has now been said to show that there is a want of harmony between the author's strong statements regarding the

unsettled problems of religion and his own avowals of a dogmatic faith. This confusion runs all through the volume, and is the effect of a failure to state with precision what the reconciliation is which is sought for. For it is one thing to reconcile thinkers and another thing to reconcile thoughts. If the problem is : Given certain open questions in science and religion how shall the truth be known?—Dr. Shields has no right to his belief in the Bible before the “umpirage of philosophy” has settled the questions pertaining to its credentials and contents. But if the problem is : Given the fact that men differ how shall they be made to think alike?—Dr. Shields, believing in the inspiration of the Scriptures, may invoke, if he chooses, the aid of philosophy or philosophers in order to convince an unbelieving world. But philosophy would be an advocate rather than an umpire then. Assuming that our author had in his mind the reconciliation of antagonistic parties rather than the solution of open questions, his consistency is saved ; but it is saved at the expense of sacrificing the reasoning of his book and of giving up the idea of “umpirage.” But it will not do to assume that we know the truth on all the questions which are debated between the friends of the Bible and the advocates of science : we should then be too dogmatic ; nor will it do to say that wherever there are conflicting hypotheses and dogmas there are open questions in respect to which we cannot say, we believe : we should then be too agnostic. The fact is, that the questions which our author has confused deserve separate treatment.

First. How should we deal with the conflicting hypotheses and dogmas to which our author refers ? They do not all stand upon the same level, and need not all be treated in the same way. A philosophical system may be so wild that a Christian (the truth of the Bible as an evidenced and established fact being here assumed) may very properly reject it, because it is in manifest opposition to the Scripture. Must a man hold in abeyance his belief in God until some second Lord Bacon comes along to settle the dispute between Pantheism, Positivism, and the Bible ? Or a Christian thinker may very properly take the position of an Indifferentist : unable to meet scientists on

their own ground, he may yet be confident that their hypotheses cannot by any latitude of interpretation be made to harmonize with the Bible. Again, great service may be rendered to the cause of truth by such writers as Guyot and Dawson, and they would be classed among the Eclectics; in fact they are cited as such in the chapter which condemns this eclecticism as "specious," "partial," "illogical," "unscientific," "narrow," "premature," "visionary," and "vague." Once more, the dogma that the heavens are "a canopy of blue or an illuminated dome" has disappeared in the presence of the incontestable facts of science; and so far as this particular subject is concerned, the whole Christian world, with the exception of Mr. Jasper, must be classed among the Despondents. Instead of uttering words of condemnation against each of these four classes of thinkers, and so immuring the Christian world in a dungeon of dreary nescience until some knight of philosophy sounds the note of deliverance, it would be safe to say that by dividing the work of reconciliation among the Extremists, Indifferentists, Eclectics, and Despondents, it can be accomplished satisfactorily and without much delay. Or, to put the matter in another form: It is not strange that a book which exposes so many surfaces to criticism should encounter opposition. When the Bible has to meet the objections of the astronomer, the geologist, the archæologist, the ethnologist, the historian, and the metaphysician, and show cause why it should not be cast aside as worthless when from any of these quarters it is charged with inaccuracy, we may expect that it will give its defenders a great deal to do. And when it is remembered that by far the greater number of objections to the Bible do not consist of facts in the material world which are alleged to contradict the statements of Scripture, but of unproved and unprovable hypotheses, to explain facts which are already accounted for and explained in the Scripture, no false delicacy should prevent a man from opposing the hypotheses because they are unscriptural. And when Scripture and science deal with the same subjects it is safe to predict that they will not disagree when it is understood that Inspiration is not responsible for false renderings, and that science is not a synonym for hasty generalization. But it is only within a narrow area that any

concessions to science on the side of exegesis can be expected ; and it is within this area that the issue is joined between traditional interpretation and alleged scientific fact. Dr. Shields has exaggerated the opposition between science and the Bible by giving weight to every philosophic vagary and scientific speculation, and allowing them to stand in a position of rivalry to the Bible. In this way the whole Bible becomes a sealed book, which no one is worthy to open who has not been instructed in the Final Philosophy.

Secondly. Assuming the truth of the Bible as to its credentials and its contents, how are the differences between scientists and religionists to be reconciled so that the former shall not deny the teachings of the Bible, and the latter shall not deny the teachings of science ? This is the question which many readers of the volume under review will suppose that Dr. Shields has had in his mind, and they will on that account approve of the answer which he has given. When the question is put in this way, no objection can be made to the "umpirage of philosophy." There can be no doubt respecting the real importance of the work which such men as Winchell, Cocker, Cook, and others are doing. There is a great work of synthesis to be done, and Christian thinkers should have their full share in it. It is conceivable that a systematic exhibition of the facts of nature and of revelation would by its very symmetry give visible proof of the harmony of science and religion. And both for the sake of science and of religion the establishment of chairs of philosophy as distinct from chairs of science, mental, moral, or physical, or chairs of metaphysic, would be a very important addition to the college curriculum. In all this Dr. Shields is right, though he is probably too sanguine in his expectations respecting the effect of the umpirage of philosophy upon the unbelief of the world.

As the reconciliation of science and religion is to result from the umpirage of philosophy, so a true philosophy, in the judgment of our author, is to be the fruit of a reconciliation of the rival systems of Positivism and Absolutism. Assuming that Positivism is the same as inductive science, Dr. Shields is right in saying that it is not necessarily antagonistic to

religion ; and assuming that the Absolute means God, his discussion of some recent phases of the theistic controversy is just and able. But Positivism is not the same as inductive science, and there are more than "five" questions which can be asked about the Absolute. One is, What is it? and our author forgets apparently that it has received a great many answers. But these chapters are not referred to here for purposes of criticism. They show a very just appreciation of the relations of these philosophies to religion. Dr. Shields has looked at Positivism and its rival from one point of view ; but there is another which is just as important. He looks upon the parted waters of these philosophic streams, and sees the Final Philosophy in their future union. He knows, however, that they were once united, and no one knows better than he does the causes which have produced on the one side a current of monistic idealism, and on the other a current of monistic materialism. Nothing in the sphere of religious philosophy is more important than the question, What is knowledge? For if, as Hume says, knowledge is a feeling or a recollection of a feeling, it is impossible to recognize any bond between a succession of feelings ; impossible to recognize feelings as successive ; impossible to recognize this feeling as *a* feeling ; impossible to say "this" or "that," "here" or "there," "now" or "then," in reference to feelings, for to do so would be to speak of relations, and relations are not feelings. And so Mr. Green says pithily, "A consistent sensationalism must be speechless." Hume is the recognized metaphysician-in-chief of the Positivists, and the proper reply to Positivism is that which shows its inconsistency. It cannot make its attack on Christianity except by denying that there are *à priori* ideas which antedate experience, but it cannot take this step without committing suicide. "Experience cannot possibly be the parent of science ;" nay, without the *à priori* ideas which the mind brings with it and applies to what are called the facts of experience, there can be no experience ; and the defence of these *à priori* ideas is as necessary to the science which denies them as it is to the religion which the denial of them tends to overthrow. When the Positivist says that he knows nothing about cause or substance, and hence nothing about God or the soul, he

means that all knowledge comes through the senses, and that phenomena are the only legitimate objects of inquiry. The refutation of his position must consist in the demand that he carry the principles of his master to their logical conclusion, and when he does this he will be "speechless." The two postulates of religion are a personal self and a personal God. Positivism denies both ; and Absolutism is just as bad. Professor Caird, for instance, rejects the common belief of mankind in mind and matter because mind and matter are abstractions. He rejects them, that is to say, because we have no experience of them. Grant that we have none. Has he had any experience of absolute being? And is it good reasoning, first to reject mind and matter because they transcend experience, and then assume that what are called by these names are only the phenomenal manifestations of an absolute something which also transcends experience? Distinct as these philosophies are, however, they occupy a certain common ground. They are both monistic ; and antithetical as they may appear to be, the passage from one to the other is not impossible. Pantheism, says Ebrard, is the way to materialism. See this illustrated in Strauss and Feuerbach. Positivism has its affinity with Idealism. See this illustrated in Mill's examination of Hamilton, and in Huxley's lecture on Descartes. And the practical effects of the two systems are very much the same. Mr. Harrison is a Positivist ; Mr. Bradley is a Hegelian. Both protest loudly against egoistic morality ; both insist on the importance of religion as distinct from morality, and both, by their philosophy, would destroy the possibility of either. For in order to authoritative morals there must be obligation, and in order to an effective code of morals there must be an adequate reason for recognizing obligation. But how a positivist can have an obligatory system of morals it is hard to conceive. The genesis of obligation out of expediency, of "ought-not" out of "better-not," has never been effected. Mr. Bradley will say "ought" as loudly as anybody, and make fun of all attempts to hatch "oughtness" out of utilitarian egg-shells ; but what does "ought" mean when the identity of God and man is affirmed? Mr. Harrison's philosophy leaves us no God, and Mr. Bradley's no self distinct from God. And

suppose that obligation does exist, what does it amount to if a shot-gun will place a man beyond the reach of retribution? Destroy the piers on either shore of Niagara, and leave the bridge suspended in mid-air. This is a trifling feat of engineering skill compared with the attempts which these philosophers are making to maintain religion and enforce morality after denying the existence of an immortal self and a personal God. Professor Shields well says that "between the Hegelian universe of bare ideas and the Comptean universe of dead facts, there is, in sooth, as little to choose as between a ghost and a corpse." A sound metaphysic conditions the possibility of religion. Mr. Hodgson may ridicule what he calls "church-philosophy;" there can be no church without philosophy. Defend the substantial dualism of subject and object: this will give us a perdurable self; and this again, as Mr. Hutton has remarked, will "open a broad way into Theism."

Dr. Shields does not pretend to have constructed the philosophy which gives the title to his book. This will be a disappointment to some; for they will feel that the outcome of the volume falls short of the promise with which it began. Others again who may have opened it with the feeling that the title is ambitious will be gratified as they approach the conclusion to know that the author, after giving a name to that supreme architectonic study which is to include all the sciences, has presumed only to sketch in outline what he thinks must be its method; while he frankly says that the detailed construction of it must be the joint labor of many minds for many years. The work of building up the scattered elements of knowledge is one of great importance, and there is no reason why the Positivists should monopolize it. It is time that some should undertake to do, from the standpoint of Theism and in the interests of Christianity, what Fiske and Lewes and Spencer are doing in the interests of Positivism; and it is gratifying to know that there is at least one Christian thinker whose mind is turned in this direction. That the time is now ripe for the inauguration of the *Philosophia Ultima* is not indicated by the present condition of scientific research; and that this continent is the predestined arena in which the kingdom of philosophy is to be established, is an idea for which patriotic reasons may be

given, though it is not justified by any existing pre-eminence of American thought. But these are small matters. The mistake of Dr. Shields has been in allowing the title of his chair to influence his conception of the Final Philosophy. It is an error to suppose that the reconciliation of science and religion is the true function of philosophy. The effect of it is in the first place to magnify the opposition of science and religion, and so enlarge the area of apologetics ; and in the second place to put unphilosophical elements into the very foundations of the philosophic structure.

A comprehensive philosophy must deal with truth as truth, and all that pretends to be truth must submit to the proper tests of certitude. Question-begging alliterations like Reason and Revelation, Faith and Philosophy, are bad enough in popular apologetical literature. But they should be banished from books of a more serious nature, and certainly they should have no place in a great summative science such as the Final Philosophy ought to be. Such a philosophy must co-ordinate the facts of the several sciences, and express the broadest generalizations which that co-ordination will furnish. Here it must follow the method of Comte rather than that of Hegel. It must also be a critical study of the conditions of knowledge—an inquiry concerning human understanding ; such a study will reveal the fact that there are *à priori* ideas, and a sound philosophy will not send them away in disgrace by saying that they are “metempirical.” And thirdly, among these ideas substance will hold no mean position, and in the inevitable dualism of mind and matter we shall have a metaphysic which Mr. Lewes may not be able to reduce to what he calls “the method of science.” What that great summative science shall be called is a matter of minor importance. Call it philosophy if you will, and thereby indicate the spirit in which truth should be sought. Call it science if you wish to have it understood that in it is to be seen a systematic exhibition of what is known. But if the topic with which it is chiefly concerned is to determine its name, then its most appropriate title will be Theology. A comprehensive philosophy must regard the spheres of moral and material order under some unifying category. That category is God. The true conception of the universe, as Dr. Cocker

shows, is the theistic conception. "Theology," as Dr. Winchell says, "is the granary in which the fruitage of philosophy and science is garnered." And this is also the view of Dr. Shields, for he says : "As the universe, the totality of existence, acquires intelligibility, becomes a cosmos instead of a chaos, only when it is viewed as the creation of a Creator, so the sciences can only be resolved into a system by means of theology."

FRANCIS L. PATTON.

THE CRITICAL ESTIMATE OF MOSAISM.¹

THE three volumes of Kuenen, upon the religion of Israel to the fall of the Jewish state, have a very distinct purpose. They aim at giving mature and vivid expression to what their author would assuredly not object to our designating the *critical* estimate of Mosaism. It would be discourteous, if not erroneous, to call these volumes rationalistic, for rationalism is that mental tendency which impugns the veracity of Scripture on the assumption of the inviolable truth of certain first principles, such as the incredible nature of miracle and the impossibility of prediction, supposed to be given in reason. It would be equally erroneous to name these volumes neologian, since they do not exemplify slavish adhesion to any subjective philosophic system. Further, much as they approach the method of Strauss and Schenkel, they cannot be consistently described as mythical in the sense accorded to that word since the publication of the *Leben Jesu*. They are distinctly *critical*. Professing to eschew all canons of external evidence (with what justice will be presently seen), they apparently base their entire conclusions, as the critical school professes to do, upon internal evidence, rejecting scripture only when it seems to contradict scripture, and reconstructing by sheer strength of intellect a harmonious narrative more coherent than the biblical histories. These volumes are the fullest and most brilliant blossoms of that exegetical epiphyte which has been entwining itself ever more vigor-

¹ Kuenen, "The Religion of Israel to the Fall of the Jewish State." Translated from the Dutch by Alfred Heath May, and revised by the Author. 3 vols.

ously for half a century around the traditional view of Holy Writ, and which, having dismembered the prophecies of Isaiah and Zechariah as its admirers think, eaten through the connections of many of the Davidic Psalms with David and the Solomonic Proverbs with Solomon, left the apostolic authority of the Synoptist Gospels hanging by a thread, severed the gospel of John from John and the Acts from Luke, undermined the Pauline authorship of the Pastoral Epistles and the Petrine authorship of the Second Epistle of Peter, would also number amongst the gigantic prejudices it has felled the Mosaic origin of the Levitical legislation and worship.

It were devoutly to be wished that these new lights upon Old Testament story had arrived at some tolerable unanimity. Their aim is the same; their method is similar; their works are marvels of ingenuity and monuments of erudition; they reveal a glance keen, accurate, and sympathetic, into the statuesque structure and rhetorical capabilities of the Hebrew tongue, if not of the Hebrew faith; unfortunately their results are widely diverse. Some sort of analysis of the special position occupied by Dr. Kuenen may therefore be advantageously given, by way of preface to the more general study of the critical estimate of Mosaism.

The learned author of the "Religion of Israel," who has already achieved a solid fame amongst critical interpreters of the Old Testament by his *Historisch-kritisch Onderzoek naar het Ontstaan en de Verzameling van de Boeken des Ouden Verbonds*—a Historico-critical Contribution to the Study of the Old Testament (a French translation of the first volume of which has appeared, with a laudatory preface by Renan), and by a variety of archæological and exegetical studies and reviews in the *Theologisch Tijdschrift*, consistently and elaborately follows, albeit with multitudinous corrections, the stand-point of his earlier works. Likening the believers in the supernatural origin and character of the Old Testament to travellers in a mountainous region, and their opinions to the crude and insufficient images of stream and crag, pathway and precipice, gleaned from the successive glimpses of a difficult and distracting clamber, Dr. Kuenen finds a resemblance to himself in the traveller who has reached a summit, and whose horizon having become wider his

conceptions of proportion have also become more accurate, the large appearing diminutive, the hidden extensive, the final steps the foreground, and the first moving scenes the vanishing of the perspective. This mountainous journey, which has proved so expanding to the Dutch professor, is, he tells us, a laborious tour of research, to continue his own figure, through the tangled forests and treacherous bridle-paths of the books of the Old Testament. Finding no adequate or reliable record of the days of David and Solomon, to say nothing of earlier times, he selects the reign of Hezekiah as his starting-point, considering us well informed upon that century, not only from the historical books of the Kings, the composition of the prophets, but also from the prophecies of Amos, Hosea, the author of part of Zechariah, Isaiah, Micah, and possibly Nahum. By the light of the beliefs of this century, carefully deduced, he first gropes his way through the preceding ages, and then advances, on solid historical ground as he asserts, from the reign of Hezekiah to the days of the Exile, from the Exile to the Restoration, thence to the last century of the Jewish state, adding, as a kind of appendix, a summary of the history of the Jewish religion from the siege of Titus to the present day.

The general outline of Dr. Kuenen's conclusions is as follows. The children of Israel once resided in Egypt and were polytheists. They had previously been fetichists, and worshipped trees and stones. The first step to a purer faith was taken when Moses, who was possibly a monotheist, during a period of wandering in the Sinaitic desert, called the tribal god by the name of Jahveh or Jehovah, and imparted the Ten Words or the Ten Commandments (in some rudimentary form of words which became the nucleus of the present Decalogue), thus "connecting the religious idea with the moral life of the nation." It was, in the days of the Judges, largely mythical as the extant accounts evidently are, when the tribes had ceased to be nomads and had become agriculturists, that the second step in religious advance was taken. This ensued upon the rise of that astonishing type of character, the prophetic, which exercised such gigantic influence upon the entire subsequent history of Israel. To tribes disjointed and antagonistic, fighting to the death with the Canaanitish aborigines, the prophets gave the cohesion of

monarchy. They also established monotheism, for, by gradual steps and reiterated teaching during centuries, they succeeded in erecting Jehovah—who had been since the days of Moses simply what Chemosh was to the Moabites, the patron god of the tribe—into the one supreme and only God. The further development of the religion of Israel was the result of the contest of the prophetic with the ecclesiastical order, prophets and priests, in the fell struggle for existence, furthering the survival of the fittest, as prophets and people had previously done. In fact, says Dr. Kuenen, the Old Testament, critically regarded, acquaints us with three forms of the worship of Jehovah—the Jahvism of the people who worshipped Jehovah as one in a plurality of gods, the monotheistic Jahvism of the prophets, and the Jahvism of the priests, whose worship was a ritual of compromise: “The *people* acknowledged and worshipped other gods besides Jahveh, and thus fell naturally into what is usually called by a technical term, *syncretism*—that is, into a combination and intermingling of ideas and customs which had originally been connected with various gods: the *prophets* saw in Jahveh the only god, and so came naturally, as it were, to ascribe to him all the attributes and characteristics which in polytheism and by the people were distributed among the different gods: the *law*, finally, must be regarded as a compromise between the popular religion and the Jahvism of the prophets.” Thus the history of religion in Israel resolves itself, according to our author, into a history of the gradual and natural supersession of the popular views by the prophetic and of the prophetic by the legal.

Retracing our steps and representing the views of Dr. Kuenen from another point of view, his hypothesis of the origin of the religion of Israel may be put in this way. In the early days of the existence of the Israelites as a nation, they possessed no sacred literature in any way resembling the modern Pentateuch. Those five books (or rather *six*, for the book of Joshua should be included) were the production first of the prophetic, and then of the priestly party in the struggle for power. They had their birth in this wise: Jehovah was worshipped by the masses as the tribal god, in the shape of a calf or young bull, by sacrifices upon mountains and hills, the so-called groves or high places; indeed, the tribal god was popularly regarded as a terrific god of light, whose

messengers were fierce noon-day heat and consuming fire ; human sacrifices were made in his honor ; in short, the current conception of Jehovah bordered on that of Molech. It was the special merit of David, sensuous and half barbaric as was his theology, to have transferred the ark of Jahveh (of the existence of which, by the way, Dr. Kuenen scarcely gives an intelligible explanation) to a settled abode in Jerusalem, and to have given official recognition to Jahvism as the religion of the nation. From such an act there was but a step, thinks our author, to the erection of that magnificent temple of Phœnician design as well as workmanship, which was the grand achievement of Solomon. Solomon probably also laid the foundation of a priesthood, and of those three high festivals which had already become a permanent institution in the seventh century before Christ. Thus, too, Solomon unconsciously originated a deviser and custodian of an increasingly diversified oral law. Nevertheless, in the days neither of David nor Solomon was there, asserts Dr. Kuenen, any trace of that elaborate system of ritual known as Mosaism, nor, *à fortiori*, of the books of the Pentateuch which embody that system. As a matter of fact, the changes made by father and son were too radical and sweeping, and a reaction speedily set in. In revolt against this scheme of centralization, Jeroboam, recurring to the more ancient and popular practice, erected sanctuaries at Dan and Bethel, and fostered the cultus of the high places. A wide success greeted this retrograde movement, and it was only by the energetic proclamations of Elijah and Elisha, themselves presumably addicted in some degree to bull-worship, that Jehovah retained his place even as the patron deity. By the reign of Hezekiah the force of this reaction was largely spent. Once more the prophetic party took heart. Recognizing the inadequacy for their purpose of the Ten Words of Moses, and even of that small collection of private laws known in later times as the Book of the Covenant,¹ the only written code of religion and politics then extant, the party of pure religion set themselves to formulate their desires, to ascribe them to Moses, to commit them to writing, and to place them in the Temple, where they were soon after *found* by the high

¹ Viz., Exod. 20-23.

priest Hilkiah, as we *find* a letter which has been dropped into our letter-box. This programme—for the most part a wordy and rhetorical expansion of two principles, namely, no god but Jehovah, and no worship apart from the Temple—constitutes the larger portion of the Book of Deuteronomy which, read to the king, gave the initiative to Josiah's reformation. Thus commenced, thinks Dr. Kuenen, the momentous epoch of subjection to the written law. Not that the snake of idolatry was more than scotched, for the worship of Baal and Asherah continued until the days of the Exile; the formulation of Deuteronomy (in its earliest form¹) was simply the first draft of that method of attack which finally proved victorious. This first draft was still further elaborated by Ezekiel during the dreary days by the river Chebar, when, fully assured in his own mind of the certainty of speedy return, he drew up what our author calls "a complete plan for the organization of the new Israel," giving, in the first place, a minute description of a new temple, appending, in the second place, a series of detailed precepts concerning religious worship, the staff of ministrants and the rights and obligations of the prince, and regulating, thirdly, the division of the land. In thus giving utterance to his scheme for the future, Ezekiel, himself a priest as well as a prophet, commenced the committal to writing of the priestly tradition, which had been accumulating for many years. The priests in Babylonia, the kernel and flower of the Jewish nation, followed in his footsteps. A first essay in legislation (remains of which have been preserved to us in Leviticus xviii.—xxvi.) was speedily followed by others, until a complete system at length arose, set in a historical frame and presented as a restoration of the remote and glorious past. The leading details of this system were that the Tabernacle, a convenient fiction, occupied the central position of a mythical camp, and was the only legitimate place of sacrifice; and that a sharp line of demarcation was everywhere drawn between priests and Levites, and consequently between their status and immunities. What wonder, then, asks Dr. Kuenen, if, on the return of the exiles, the ecclesiastical party having an overwhelming advantage in social position and organ-

¹ Viz., Deut. 4-30.

ization, the first duty assumed was to rebuild the Temple? What wonder that the hierarchy thenceforth monopolized the first place in the annals of Judaism? And when Ezra took his stand with fourteen priests upon his lofty platform, on that memorable first day of the seventh month, and read the priestly ordinances of this deftly manufactured Book of the Law absolutely for the first time to the assembled and enthusiastic multitude, what wonder if the legalism which had been sown like a grain of mustard-seed in the days of Hezekiah sprouted into a tree that could shelter a nation? But not even yet was the work of the priesthood complete. The *Book of the Origins* (that section of the Pentateuch which the critical school has made us acquainted with under the title of the Elohist narrative—the Original Story of Colenso, *das Buch der Ursprungen* of Ewald), from which Ezra read, cannot have fully met the state of affairs which he found around him, nor could it have been introduced with effect without the co-operation of the priesthood, which had already served for sixty years in Zerubbabel's Temple. An understanding must be arrived at with this ecclesiastical interest, its wishes and advantage must be taken into account, modifications must be made as circumstances required, and, in a word, such measures must be framed and placed on record as were indispensable to the success of the undertaking. This Ezra did at his leisure, and somewhere between the years 458 and 444 B.C., thinks Dr. Kuenen, completed his final redaction of the law. Emendations were made by later hands, but no alterations of moment. With the recension of Ezra the fabric of so-called Mosaism may be regarded as practically completed; thenceforward, it was current, substantially under the form of the present Pentateuch, as the Jewish rule of faith and life. Thenceforth Judaism stood before the eyes of the world like its own Temple: Moses had first imparted its idea; Samuel and David and Solomon had endowed that idea with a local habitation and a name; Hezekiah and Josiah restored its buried glories; by the rivers of Babylon it had formed the subject of Ezekiel's dreams, and fired the priesthood with enthusiasm; it was rebuilt with more than pristine magnificence in the days of Nehemiah and Ezra, becoming the centre of a people's hopes and the spring of a people's joys; every change through-

out its chequered course had been an enlargement and every period of oblivion a night of growth ; and the splendid structure at length complete, embellishment and restoration may be undertaken at intervals, but of vital alteration there shall be no trace, for letter has usurped the place of spirit, the written of the oral word, the scribe of the prophet, the Aaronic priest of the priesthood open to every son of the nation.

Such, consecutively arranged and very freely translated from the cumbrous and abstract style of our author, is the hypothesis put forth in these volumes. The most superficial reader will perceive the immense change of view its acceptance would necessitate. So far from being the supernatural gift of Deity, the Levitical system would become the natural if slow outgrowth of the religious instincts of man, a survival of the fittest, a victor in the bitter and prolonged struggle for existence. The rubric of Judaism would resemble that of the Vatican. Sinai and its divine voice becomes a myth ; the voice which Moses heard between the cherubim is also mythical ; the association with Moses of any portion of the so-called Mosaic legislation, with the single exceptions of a wavering predilection for monotheism and the germinal moral code which subsequently grew into the Decalogue, is the pious fraud of prophets, the iniquitous fraud of priests. The central sanctuary with its Holy Place and Holiest is a study from the Phœnician. The Tabernacle of the Wilderness is a deliberate fiction made for religious ends on the rough and ready method of turning the Temple into a tent, and halving the dimensions. As for the triple division of the sacred ministrants, the distinctions between Aaron and his sons and his tribesmen being unknown before the Exile, the insertion of these distinctions in the national archives was a priestly device for retaining usurped power. If the three great feasts were celebrated in the days of Solomon, the Day of Atonement at any rate was post-exilic ; if the Passover was celebrated by Hezekiah and Hilkiah, it was because the Passover was the creation of Jeremiah, Hilkiah's son. The round of daily, weekly, monthly, and festal sacrifices was the imposing adjunct devised by ambitious priests for the assurance of priestly dominion in realms moral, political, and fiscal. In the words of one of the boldest advocates of this theory, " For many cen-

turies after Moses the Levitical ordinances were neither practised nor known ;" the ascription of the institution of the priesthood to Moses " is absolutely against all historical evidence ;" indeed, the statements of the Exodus on this head " imply the artful fiction of an author or authors who attempted to promulgate their own devices as divine or supernatural arrangements, and thus to awe an impressionable nation into their acceptance and reverential observance ; . . . they are both a failure and a fraud ;" the Levitical laws of purification were " the results of many generations and the work of many minds ;" the Levitical system of sacrifices " is not the work of a generation, but the result of succeeding ages ; its beginnings may reach back to early times, possibly to those of Moses, but its progress and development were slow and gradual ;" the ritual and idea of the Day of Atonement " demanded the incessant labors of a thousand years ;" as for the cycles of religious feasts, they " attained their highest and final form only during the time of Zerubbabel's temple ;" in short, what Dr. Kalisch expressly says of Leviticus applies, in his esteem, to the whole Pentateuch—" it was, in fact, the product of many minds writing at different times and with special objects in view, and it received but gradually its present form and dimensions."¹ Dr. Kuenen's title-page might not unsuitably read, " The Religion of Israel ; or, the Application of the Principle of Natural Selection to the Religious History of the Jews." Dr. Kuenen's is the evolutionary theory of Mosaism.

In view of so revolutionary a hypothesis, the question arises, upon what data the Christian Church is bidden change the commonly received theory of the supernatural and Mosaic origin of the Tabernacle and its worship, of the Decalogue and its multitudinous expansions? Of course the lover of truth will gladly sacrifice at any time preconceptions to proved facts, but what is the evidence offered in behalf of this genetic origin of Mosaism? We are at once confronted with the unquestionable fact that

¹ " A Historical and Critical Commentary on the Old Testament," Leviticus, part 1, 1867 ; part 2, 1872 ; see especially the essays on the Sacrifices of the Hebrews, on the Hebrew Priesthood, on the Laws of Purification, on the Day of Atonement, and on the Date and Authorship of Leviticus.

Dr. Kuenen is to some degree absolved from stating in the work before us the entire evidence for his conclusions. He has already devoted two considerable volumes to the critical study of the Old Testament, the conclusions of which he is of course at liberty to assume, so far at least as his later researches have left those results unmodified; not only so, it has also been the learned author's lot to enter into the labors of a long line of predecessors in the same field. If Dr. Schultz, in stating the postulates of so important an inquiry as that into the theology of the Old Testament, can appeal to the results of the criticism of the Pentateuch, and without further ado proceed on the assumption that the extant records of the so-called Patriarchal and Mosaic ages are unhistorical, commencing his statement of religious belief with the days of Samuel,¹ it need cause no surprise if Dr. Kuenen follows a similar plan. The fact is, the theory before us can only be adequately and fairly discussed after an investigation into the complete course of *criticism* from its inception until now.

The progress of the so-called *critical* study of the Pentateuch has been marked by three distinct phases. In the first phase, the Genesis alone was submitted to a process of decomposition. This phase is known as that of the compilation or documentary theory (Urkunden-Hypothese). The Genesis being regarded, to use a chemical technicality, as a mere mechanical mixture, it was thought to be readily separable into its component parts by commonplace expedients. The analytical method which ultimately yielded such unexpected results was supplied by one Astruc,² a Parisian physician. Concentrating attention upon the singular usage of the divine names in the first book of the Pentateuch, he started the idea that Moses had compiled the book from two principal documents—distinguished by the employment of Elohim and Jehovah respectively to designate the Deity—inserting additional matter from ten smaller memoirs. This idea of a compilation from two documents, which soon came to be popularly known as the Elohist and Jehovist manuscripts, was

¹ "Alttestamentliche Theologie," 2 vols., 1869; see preface and p. 75.

² "Conjectures sur les mémoires originaux, dont il paraît que Moyse s'est servi pour composer le livre de la Genèse." Brussels, 1753; a German edition was also published at Frankfort, 1783.

adopted a few years later (without, however, many minor qualifications made by Astruc) by Eichhorn, Möller, Bauer, Gramberg, Stähelin, and many others. When objection was taken by the advocates of the unity of the narrative, that these two documents could not possibly be demonstrated to be consecutive, the hypothesis of a dual became that of a triple compilation in the hands of Ilgen, who affirmed the existence of three records, two Elohist and one Jehovistic. Nor did the disintegration end there; subsequent critics finding traces of four documents and more.

The second phase was that of the Recension Hypothesis, or the theory of Supplements (*Ergänzungs-Hypothese*). According to this view, the Pentateuch consists of one fundamental document (the *Grundschrift* of the Germans, the *Original Story* of Colenso), which has been repeatedly revised and supplemented by successive editors—that is to say, to carry on the previous chemical illustration, the Mosaic books are no longer regarded as a mere mechanical mixture, readily separable into its component parts, but as a stable compound of a distinct base and several organic products, only resolvable by the subtlest powers of analysis. There was undoubtedly an appetizing charm about this conception of a *Grundschrift* traceable throughout the Pentateuch, and discoverable, not by the somewhat coarse test of the divine names, but by those more refined analytical methods which determine literary style, peculiarities of diction, psychological assumptions, theological predilections—all those eluding features of difference which only a cultured and sensitive criticism can detect. The way for this more organic and fascinating conception had been already prepared by casual remarks in influential writers like De Wette, Kelle, Ewald, and Stähelin, and, being minutely elaborated by highly skilful and accomplished scholars, it soon assumed a position of extreme importance. All its advocates were agreed that the so-called *Grundschrift* gave a connected account of the entire epoch from the origin of the world to the conquest of Canaan; they differed as to the date and manner of composition, the time and method of revision. According to Tuch, Stähelin, and Kalisch, the *Original Story* of the Elohist was supplemented by the interpolated narrative of one later reviser, the so-called Jehovist. According

to Bleek, De Wette (in his latest opinion), and Von Lengerke, the Original Story was first supplemented by the Jehovist, and was afterward subjected, about the time of Josiah, to a later revision, at the hands of the Deuteronomist. According to Dillmann and Vaihinger, the work of the Elohist was first revised by a second Elohist, then by the Jehovist, and then by a final redactor, the Deuteronomist. Davidson and Nöldeke distinguish the final redactor from the Deuteronomist, thus discerning five authors and editors. Knobel also recognized the labors of several authors, but he regards, to put his views as broadly as possible, the *Grundschrift* as sharing with two others which he names the Book of Laws (Recht-buch) and the Book of Wars (Kriegsbuch), the position of being original materials, worked up first by the Jehovist, and then by the Deuteronomist, who was in all probability the famous Hilki'ah. To these opinions must be added the two views of Ewald; the earlier that the work of the Elohist (the Book of Origins, as he names it) embodied a more ancient work (which he named the Book of the Covenant), and was subsequently enlarged by a third and a fourth and a fifth narrator (the Deuteronomist); according to his later view, the Book of the Origins was preceded by three works—the Book of the Wars of Jehovah, a Biography of Moses, and the Book of the Covenants. Omitting minor names and opinions, we may now pass on, drawing attention meanwhile to two great results almost unanimously insisted on in this second phase: first, that Deuteronomy was the latest of the five books and was written about the time of Josiah; and, second, that the ecclesiastical system so well summarized and understood by the name of Mosaism was regarded as part of the *Grundschrift*, and in all probability largely transmitted from the days of Moses by oral tradition. As Bleek tersely put it, "An important part of the laws and ordinances of the Pentateuch is of such a nature that, judging from their purport and form, it is impossible that they could belong to any other age than the Mosaic;" and similar sentiments have been repeated almost verbally by Davidson, De Wette, Dillmann, Ewald, Knobel, Nöldeke, Schultz, Vaihinger, and Von Lengerke.

A third departure was made when criticism began to throw doubts upon the homogeneity of the Mosaic legislation. So

early as 1862, Julius Popper,¹ a Jewish scholar and antiquarian, published a treatise on the Tabernacle with the express purpose of demonstrating the post-exilic origin of the account of its construction in the Exodus. This fertile idea rapidly took root, and a few years later the late lamented Carl Heinrich Graf² revived in a new dress the old rationalistic theory of Vatke and George, and the post-exilic theory of the origin of the Levitical legislation came forth, born of acuteness and educated by erudition, the latest exemplar of the doctrine of evolution. According to this view, the Book of Deuteronomy, still regarded as written about the time of Josiah, is the earliest instead of the latest draft of the Jewish religion, exceedingly rudimentary therefore and incomplete—that elaborate civil and religious system presented in the Pentateuch being the slow and steady accretion, during centuries of thought and vicissitude, of the grandest representatives of those prophetic and ecclesiastical men of genius so characteristic of Judaism. Further description is unnecessary after our analysis of Dr. Kuenen's great work, which follows step by step the hypothesis of Graf. The most thoroughgoing exponents of this evolutionary theory are Kuenen, Kalisch, Kayser,³ and Colenso.⁴ The theory itself is daily making fresh conquests.

An examination, therefore, into the critical estimate of Mosaism becomes of necessity an examination into three hypotheses: of the composite structure of the Pentateuch, of the rudimentary character of Deuteronomy, and of the evolutionary nature of Mosaism. Those accurate balancings of *minutiæ pro et con*, which are as indispensable to the formation of a sound judgment as valueless to its impartation, space compels us to omit. The general line of argument can alone be indicated. Even that indication must be as brief as possible, that we may proceed to our main purpose; but we are forestalling.

¹ "Der biblische Bericht über die Stiftshütte, ein Beitrag zur Geschichte der Composition und Diaskeue des Pentateuch."

² "Die geschichtlichen Bücher des A. T.," 1866.

³ "Das vorexilische Buch der Vorgeschichte Israels und seine Erweiterungen," 1874.

⁴ "The Pentateuch and Book of Joshua, Critically Examined." Part vi., The Later Legislation of the Pentateuch. 1871.

In estimating the evidence for the composite structure of the Pentateuch, it is difficult to repress two suspicions which materially affect the value of that evidence. The first suspicion is that the numerous details accumulated in proof are not the real data by which decision has been reached. Critics, like diplomatists, are much given to framing arguments to make prepossessions plausible ; nay, when one set is demonstrated invalid, they are wont to straightway devise another. The wish in criticism is often father to the thought. At any rate, the history of criticism has been an incessant adjustment. It has not been a record of the rise and victory of a theory, well defined in principle and in detail, like the dynamical theory of light, or the protoplasmic origin of vital structure, or the physical generalization of the conservation of energy, or Ricardo's theory of rent ; it rather resembles the alternate rise and fall of materialism in philosophy or Epicureanism in ethics. If the adherents of the Mosaic origin of the Pentateuch have abandoned some incautious statements, and made some needful rectifications of their position, the course of the adherents of the opposite view has been one of ceaseless change of front and method of attack ; driven from one point, they have immediately assumed another ; compelled to relinquish one weapon, another has been immediately forged. From a dual theory of composition, they have advanced to a triple and a quadruple and a quintuple and a multiple theory, each numerical classification being a colligation of things alike but in name, the sole base of union being a common enmity. Is it therefore matter for surprise, however much Dr. Kuenen and others may deprecate an intrenchment behind the mutual disputes of the supporters of critical research, if such variations should arouse the suspicion of special pleading ? And this leads the way to the second suspicion : *that the real objection to the Pentateuch is objection to its contents*. The older rationalists everywhere assumed that a historical document which relied upon miracle or prediction was *ipso facto* untrustworthy ; is there not some latent *à priori* objection to the supernatural at the foundation of modern criticism ? Every psychologist must have observed how readily, in this mysterious and complex world, large numbers of facts can always be made to ally themselves on the side of any hypothesis which

momentarily commends itself to that *ensemble* of feeling we can only denominate instinct or *Zeitgeist*; is there not in the minds of the *critics* some concealed prepossession which unconsciously influences the selection of "the facts which illustrate"? Has not Darwinism in theology as well as in biology its roots in dislike of divine interference? Hengstenberg made a collection of incidental declarations in which his opponents betrayed or confessed that their *pièce de resistance* was an initial disaffection toward the supernatural; might not that collection be startlingly completed to this date? Certainly Dr. Kuenen, whilst apparently resting the proof of his position upon an analysis of documents, frankly says, in defining his stand-point, that the religion of Israel is to him one of the principal religions of the world, "nothing less and nothing more" — that, although "this cannot be admitted by those who derive the Jewish and Christian religions from special divine revelation, and all other forms from human invention, . . . impartial criticism" remembers that the belief in the supernatural origin of their faiths "is by no means exclusively characteristic of Israelites and Christians, they hold it in common with the adherents of many, nay, of most other forms of religion, Zarathustra, Sakya-Mouni, and Mahomet passing among their followers for envoys of the godhead;" and that "no one can expect or require . . . a complete demonstration of the right of the modern as opposed to the ecclesiastical view; . . . we have outgrown the belief of our ancestors." So Kalisch, having eulogized "the fearless and penetrating investigations of Darwin, Huxley, and Lyell," expresses "the hope . . . that he has aided, however humbly and modestly, in supporting, by arguments derived from his special department of study, the philosophical ideas which all genuine science at present seems eager to establish;" declares the biblical cosmogony to be "grand and sublime," but "erroneous and unscientific;" speaks of miracles as "absolutely opposed to our notions of the universe, . . . at once impossible and incredible;" asserts "human supplications, sacrifices, fasting, or any other form of devotion or asceticism" to be powerless "to exercise an influence on the course of events or on the destiny of men;" finds divine revelation to "precisely coincide with human knowledge

and wisdom ;" and defines inspiration as " nothing but the intellectual or moral elevation of man himself striving to rise to the utmost greatness and purity of his nature." ¹ Even Colenso, commonly so cautious in the statement of his ultimate views, does not shrink from writing : " Perhaps the most important result of the criticism of the Pentateuch is this, that it strikes a death-blow at the whole system of priestcraft, which has mainly been based upon the notion that the Levitical laws . . . were really of Mosaic, or rather of divine origin : we have now seen that these laws are all without exception the product of a very late age ; . . . but with the priesthood comes to the ground also the whole ritualistic system with its multitude of sacrifices, expressly contrived, not merely for the relief of the burdened conscience of the sinner, but for the benefit of the priest : let it not be said that these all, with the sprinkling of the blood, point to the blood of Christ as of a lamb, without blemish and without spot ; with our present knowledge of the time and manner in which the later legislation originated, it is impossible to believe this. . . . How, indeed, could those narrow priestly notions set forth in any way the sacrifice of Christ ?" ² In which remarkable utterances of the Anglican bishop, one who reads between the lines may well see cause regarded as effect. In like manner, when incidentally speaking of the historical allusions in Deuteronomy, the able translator of Ewald's history writes, they " are of that explicit and detailed character which betrays the fact that they are written after the event, and that the name of Moses as speaker is simply used by the anonymous writer as Merlin, Solomon, Ossian, etc., in other literatures." ³ Frankly enough, also, Graf, at the very outset of his inquiry, put the matter thus : " The reply to the question in what particular epoch . . . we regard the Mosaic legislation, as it now lies before us, to have been completed, really amounts to this, whether, in accordance with nature and analogy, we shall regard it as an evidence and a result of a gradual development proceeding out of a fruitful germ, or as a thing

¹ " Leviticus," vol. i., Essay I., § xxv., On the Theology of the Past and Future.

² " The Pentateuch and Book of Joshua," part vi. pp. 631, 635, 637.

³ Russell Martineau, article on the " Legislation of the Pentateuch," in the *Theological Review* for 1872.

completed at the first and lying at the base of every further development.”¹

But whatever truth there is in these suspicions—and no undue emphasis has been laid upon them—certain it is that the long array of evidence adduced in behalf of the composite structure of the books of Moses, judicially examined, does not warrant the conclusion drawn. It may equally warrant quite another conclusion. The whole evidence may be conveniently classified as follows. First comes the notorious fact of the singular usage of the divine names already alluded to. Then, secondly, there is the *negative* testimony, consisting of certain apparent anachronisms, omissions, repetitions, and contradictions; thus the Mosaic authorship is inconsistent, it is argued, with the insertion of such historical, geographical, and archæological statements as “the Canaanite was then in the land” (which implies, it is alleged, that at the time of the writer the Canaanite was *not* in the land), or the allusion to Dan in the days of Abram (when the name of Dan was only given to Leshem at the conquest of Canaan), or the supposition that Moses wrote the narrative of his own death; so, also, stress is laid upon the paucity of detail upon such points as the lives of Hur and Jethro, and the story of the wanderings in the wilderness, all of which, it might have been confidently anticipated, Moses would have enlarged upon; then, too, difficulty is seen in the repetition of the narratives of the creation, the covenant with Abraham, the promise of Isaac, the seizure of Sarah, the call of Moses, etc., and the further illustration of the same fact which the repetition of many laws afford; a few contradictions subversive of the Mosaic authorship are also seen in matters chronological, legal, historical. Thirdly, comes the *literary* testimony, according to which a variety of authors is suggested by peculiarities of phrase, peculiarities of thought, peculiarities of style, whilst, it is averred, an unsuitable and unnatural arrangement throughout the entire Pentateuch militates against the unity of composition. A fourth species of evidence may be designated *evolutional*, exhibiting as it professes to do most palpable traces of growth and expansion. In the fifth place,

¹ “Die geschichtl. Bücher,” p. 1.

it is insisted, as a question of *documentary* evidence, that, on the one hand, the later books of the Old Testament canon do not presuppose the first five books, and, on the other hand, that there is a considerable linguistic resemblance, as Gesenius urged, between the later books and the earlier. A final variety of proof lies in the *à priori* arguments which are the current phase of rationalism. The general course of reply to these arguments has been long known, and is being daily strengthened. The *à priori* argumentation as to the impossibility of miracle and prediction, and the unreliableness of documents containing one or the other, may be at once dismissed. As for the documentary evidence, it tells the other way ; for, as Hengstenberg and Keil have conclusively shown, all the later historical, prophetic, and poetical books presuppose the Pentateuch ; nor is it sufficient reply to this that these books presuppose some details of the Levitical legislation and national history, but do not presuppose the Pentateuch in its complete form ; cursory notice is all that the nature of the case rendered necessary ; nay, circumstantial notice would have been open to the charge that the writers knew no constant background of the Law. The fact is, criticism would undertake a very enlightening inquiry, if it would set itself to reconstruct from the books of the Maccabees, for example, the ecclesiastical system current in those days ; possibly, critics would be astonished to see that the third century affords no more proof of the fifth than the fifth does of the twelfth ; possibly, also, another adjustment would take place, and the Levitical legislation be declared to be posterior to the completion of the Apocrypha ! To the emphasis put upon evolutionary elements in the Mosaic legislation, the reply is that such are visible because there was a development of doctrine as a matter of fact ; the first rough draft, now so familiar under the name of the Book of the Covenant, being subsequently expanded into that lengthy series of commands given during the course of months from the summit of Sinai, and from between the cherubim in the Holiest, further developments and amendments being also conspicuous in Deuteronomy ; of other development there is no trace. As for the supposed literary testimony, it may be met by a flat denial ; let the variety of its subject-matter be considered, and the Pentateuch displays a remarkable harmony

of style and a most beautiful and subtle consecution of contents ; if the lexicographic and grammatical similarity be insisted on between the Pentateuch and the later books, it is only necessary to refer to the confession of so astute an antagonist as Renan (assuredly not biassed by predilections toward orthodoxy), when he directs attention to " the immobility, . . . the extraordinary fixity of the Semitic languages ;"¹ if the hackneyed objection be repeated that, were Moses the writer of the Pentateuch, he " must have created the historical-epic, the prophetic, and the rhetorical styles," we need only inquire wherein lies the absurdity of such a supposition. There are, it may be openly confessed, certain anachronisms, omissions, repetitions, and apparent contradictions perceptible ; but genuine anachronisms are much fewer than has been supposed, and are readily explicable on the acknowledged fact of repeated revisions and modernizations of the text, most being willing to echo the words of Hieronymus, " Whether you call Moses the author of the Pentateuch, or Ezra its restorer, is all the same to me ;" the omissions are quite in accordance with the general plan and purpose of the work ; repetitions do not imply variety of sources, or if they do in this case, the repetitions of any importance are confined to the Genesis, where it is quite allowable to believe that Moses employed several traditional narratives in composition ; the seeming contradictions, to be expected in any record of so distant a time, are as readily solved on the assumption of the Mosaic as on that of the genetic authorship. The one strong point of criticism undoubtedly is the extraordinary usage of the divine names, regulated beyond question by some precise law, as even Augustine seems to have perceived ;² nevertheless, to this crucial and difficult point the traditional school is not without pertinent replies. Thus, in the first place, the distinction in question, even were it as rigid as is affirmed, is restricted to the Genesis and the opening chapters of Exodus (until, that is to say, the interpretation of Jehovah given at the Burning Bush), and it is quite within the bounds of probability that, as has just been remarked, Moses may have compiled the Genesis

¹ " *Histoire des Langues Sémitiques*," edit. 4, p. 130 ; compare the remarks on the style of the Pentateuch, pp. 120, 121.

² " *De Genesi ad Litteram*," viii. 11.

from earlier documents. Still, secondly, it is more probable that the principle of which we are in search is to be found in some deliberate purpose in the mind of Moses ; a tangible purpose, explanatory of all the facts of the case, would be, to definitely associate various prominent incidents of the Patriarchal age with that special revelation of the Burning Bush. Moses seems to have employed the anachronism of the name Jehovah to emphasize the divine predestination. But, thirdly, were it admitted that no adequate solution had been found by the advocates of the Mosaic authorship, such an admission would not be equivalent to the acceptance of the composite theory ; that theory has proved itself nugatory by its abandonment of the exclusive test of the divine names, by the impossibility of constructing a consecutive narrative by that test, by the consequent acknowledgment of more documents than two, by the continual adjustments, by the insuperable fact that some Elohist passages assume the existence of Jehovistic passages, as well as *vice versa*. In short, such is the nature of the entire evidence for the composite authorship that any unbiassed reader who has followed the controversy with judicial calmness will at least pronounce a verdict of non-proven.

The same may be said concerning the rudimentary character of Deuteronomy. Rationalistic prepossessions may suffice to turn the scale ; it is questionable whether purely critical evidence ever will. Indeed, it is difficult to forget that men of so keen an analytical power and so intuitive an observation as Knobel, Ewald, and Vaihinger have regarded Deuteronomy as a fruit rather than a seed, as mature and not embryonic Leviticism. Nevertheless, let the evidence adduced be taken into account. Again, omitting as irrelevant the references to so-called prophecy after the event, such as the supposed allusions to the times of the kings and of the captivity, which only militate against the Mosaic authorship on anti-supernatural theories of prophecy, the one point insisted on is this, that the legislation of Deuteronomy is of a less developed type than that of Leviticus, as is evident on a comparison of the laws of the priesthood, the sacrifices, the festal seasons, and the tithes. Deuteronomy, it is asserted, knows no distinction between priests and Levites, but makes any members of the tribe of

Levi eligible for the priestly office. In the matter of the sacrifices, no mention is made in Deuteronomy, it is said, of the minute and diversified ritual of the Law, whilst such prominent offerings as those for sin and trespass are not so much as named. Variations are also seen in the festal regulations of the so-called later books, which add to the earlier phase the ritual of the Day of Atonement and many minor details. A manifest development is also seen in the laws of tithing. Now, to all these several objections the general reply would suffice that Deuteronomy appeals to quite another class of readers than Leviticus. Leviticus is the manual of the priesthood—to be minutely studied, specifically observed, and retailed piecemeal as occasion required or duty demanded. Deuteronomy is a popular address—highly rhetorical, intelligible at sight, planned to immediately persuade, skilfully adapted by unerring tact to the deepening of a general impression, a dying man's farewell injunctions, not a legal handbook. Leviticus is a code; Deuteronomy a sermon.¹ So far from expecting, therefore, a recapitulation of Levitical ordinances, it is matter for surprise if single precepts are cursorily mentioned. Besides, when any mention is made, it is so uncircumstantial and slight that it may be fairly assumed to have been unintelligible had the writer not been citing practices already habitual. The whole argument from absence is thus disposed of. It is true that if any Levitical regulation was falsified in Deuteronomy, the critic would stand on firmer ground. Any trace of contradiction thus calls for careful notice. Supposed contradictions are found in the mention of Levites as priests and in the laws of tithe. To the former it may be replied, that, whilst the phraseology employed is unquestionably peculiar, it is readily explained by the fact that neither writer nor audience was of the tribe of Levi; to the lay mind the point of importance would be that the whole tribe was distinguished by express selection for religious service; whereas the important thing to the Levite would be that distinction was made in the tribe itself; at any rate, the usage of the Chronicles and Malachi, which no critics regard as anterior to the distinction between priests and Levites, is precisely sim-

¹ This point was exceedingly well put in "Deuteronomy, the People's Book."

ilar.¹ The tithes are more difficult to deal with, for at first sight the allusions of Deuteronomy seem irreconcilable with the commands of Numbers. Yet even here Jewish tradition (and that as early as the Book of Tobit²) has advanced a solution equally tenable with the genetic hypothesis. According to this tradition, the tithes were divided into the first, second, and third; the first consisting of the tithes of the produce of agriculture, arboriculture, and stock-keeping, annually devoted to the support of the tribe of Levi; the second consisting of a second tithe of corn, wine and oil, to be used with the firstlings of the flock as a sacred feast at the Holy Places, and the third, the second tithe of the third year, resembling the second in every respect but this, that the feast was eaten at home, the Levite and the poor and the widow being freely welcomed to partake. Briefly summarized, the law of tithes in this view was as follows: every first, second, fourth, and fifth year, the first and second tithes were to be presented, in every third and sixth year the first tithe and the tithe for the poor, whilst in the Sabbatic year, the seventh, in the absence of tillage there was an absence of tithe. Such an explanation is perfectly feasible, and entirely removes all difficulties of interpretation. With even more reason, therefore, the truly critical investigator into the rudimentary nature of Deuteronomy may pronounce a verdict of

¹ The passages relied on by the critical school are (1) Deut. 10 : 8, where, as Graf urged, the duties of bearing the Ark, standing before the Lord to minister, and blessing, are ascribed to the whole tribe of Levi (to which it may be replied (*a*) that the tribe of Levi contained priests and Levites, and that thus the duties of the more prominent representatives might be conceivably assigned to the whole; and (*b*) that there is biblical authority for ascribing the several duties mentioned to both Levites and priests); (2) Deut. 18 : 1 (here, however, the interpretation which regards "all the tribe of Levi" as equivalent to "the priests and the Levites," is equally allowable with that insisted on by Graf, which represents "Levites" as in opposition to "priests"); and (3) Deut. 23 : 8, 9 (where, again, there is no improbability in regarding Levi as signally blessed in the prerogative of the prominent members of his descendants). But a lengthy examination of these passages has been rendered supererogatory by the recent publication of a scholarly, exact, and conclusive treatise, which has come into the hands of the writer since penning the above; the writer alludes to the work entitled "The Levitical Priests," by Dr. Samuel Ives Curtiss, junr., not the least interesting portion of which is the appreciative preface by Dr. Franz Delitzsch.

² Compare Tobit i. 7; Josephus, *Antiq.*, iv. 8, § 22; Deut. 12 : 6-12, 17-19.

non-proven. As for the opinion which Dr. Kuenen adopts from earlier inquiries, that Deuteronomy was the book presented to Josiah, Dr. Davidson may be left to answer it. He writes, "It is said that Hilkiyah the priest found the book of the law in the house of the Lord. That this *was the Pentateuch* may be inferred from the following considerations: (a) Josiah ordered the Passover to be kept as written in the book: 'And there was not holden such a passover from the days of the judges that judged Israel, nor in all the days of the kings of Israel, nor of the kings of Judah.' In order to celebrate the passover with so much solemnity, the entire Pentateuch would be required, because the principal law respecting that feast is in Ex. 12 : 1-20 and Numb. 28 : 16-25, whereas the particulars respecting it in Deuteronomy are fewer (16 : 1-8); (b) the curses in the newly found book (2 Chron. 34 : 24) could not be exhausted by those in Deut. 27 : 14-26, 28 : 15-68; Josiah must also have read the shorter imprecations in Lev. 26 : 14-45, because of the 30th verse of Lev. 26, compared with 2 Kings 23 : 14-16. In the former we read, 'And I will cast your carcasses upon the carcasses of your idols;' in the latter it is said that Josiah brake in pieces the images and cut down the groves, and *filled their places with the bones of men*, and also that he took the bones out of the sepulchres and burned them upon the altar and polluted it. This novel mode of pollution seems to have originated from reading the book, which must have been the Pentateuch. . . . We cannot agree with such as think that Hilkiyah practised a fraud on this occasion, by substituting a composition of his own, or one concocted by himself and a few others. Whatever may have been the circumstances of the times, it is inconceivable that a band of theocratic patriots should have recourse to such means to supply a firm foundation for the popular belief, and at the same time to increase the authority of the priesthood; neither the whole work nor the book of Deuteronomy was brought forth from a place where it had been designedly put to be shown to the king for the first time, for how could Hilkiyah say to Shaphan, 'I have found *THE book* of the law,' if the whole book were really new?"¹ In which remarkable

¹ "An Introduction to the Old Testament," vol. i. pp. 131-134.

utterance of the great familiarizer of criticism we heartily agree : a Saul when he is among the prophets may say something worth listening to.

Nor can any different verdict be passed upon the theory of the post-exilic origin of the Levitical legislation, the proof of which is supposed to issue upon an examination, first, of a series of contradictions in the laws and history contained in the Pentateuch, and, secondly, of a highly wrought scheme of composition, with which the reader is already familiar from the analysis of Dr. Kuenen's work. Each of these branches of evidence is distinct, for either the negative or the positive argument, if regarded as cogent, would suffice to overthrow the Mosaic authorship, the former by directly discrediting the unity of the Pentateuch, and indirectly the connection with Moses ; the latter by directly contravening the connection with Moses, and indirectly the unity. Upon the long array of negative charges brought forward by Graf and repeated by Colenso, Kalisch, and Kayser, with more or less additions, space does not permit us to enter ; we would simply record our conviction that none of the difficulties are insuperable, and that all are as readily explicable upon the Mosaic as upon the genetic hypothesis. As for the alternative scheme of authorship, it is a most skilfully constructed chain, no doubt ; the prophetic school put forth Deuteronomy, Ezekiel expanded the general precepts therein contained into chapters 18 to 26 of Leviticus, these suggestive chapters were subsequently developed into the maturer system of the closing chapters of the Exodus and the larger half of Leviticus. But no chain is stronger than its weakest link, and what demonstration is offered that Ezekiel composed the chapters attributed to him ? This only : a similarity of style and contents to the prophecy of Ezekiel, and a similarity of style betokened by purely verbal resemblance. Thus Colenso, who has most amorously elaborated this arithmetical class of testimony, assures us that there are twenty-two verbal formulæ common to the twenty-sixth chapter of Leviticus and Ezekiel, which occur nowhere else in the Bible, and thirteen which occur nowhere else in the Pentateuch, etc., etc. But there is an alternative explanation of these phenomena. Ezekiel was a priest ; he would know Leviticus almost by heart ;

the prophecy of Ezekiel is conspicuous amongst the prophecies by its legal stand-point and phraseology ; whilst as for this twenty-sixth chapter, this is the very portion of Leviticus which the melancholy events of the time would stamp most indelibly upon mind and memory. One would have imagined besides that the merest tyro in Hebrew style would have seen that there is an utter dissimilarity between the terse, compact, and pure Hebrew of Leviticus and the circumlocutory and Aramaized Hebrew of Ezekiel ; nor are these broad distinctions more palpable than those innumerable minor differences which a cultured literary instinct immediately detects. If style is to be judged by verbal formulæ, we shall have to argue that Bunyan wrote the Authorized Version and Robert Hall penned *Rasselas* !

So much for the rebutting evidence. A line of reply has at least been indicated. Not that disproving one theory is substantiating another. The greatest admirer of apologetics will admit that negative evidence has nothing like the weight of more positive proof or even of vehement assertion. To bring the inquirer, for example, face to face with the living Christ by circumstantial study of the Gospels, by acute analysis of His spoken words, by pictorial efforts of the historical imagination, by reverent realization of the ideal of the church catholic, even by blind faith that is ardent, by indiscriminate admiration that is fervid, does more for the engendering of conviction than the most incisive examinations of the speculative Christs of a Marcion or an Apollinaris, a Strauss or a Keim. The Bible, too, is the best confutant of anti-scriptural theories. So undoubtedly the Mosaic origin of the Pentateuch is better defended by a direct contact with those five books themselves than by any refutation of opposite views. And there are many affirmative lines of argument. The advocate of the Mosaic authorship may appeal to the numerous descriptions, so exceedingly detailed, so precisely local, only referable to the Mosaic age, which became so powerful a weapon in the hands of Bleek ; he may construct, with far less subtilty and acumen than a Paley, a *Horæ Mosaicæ* of undesigned coincidences, so large a contribution to which might be gleaned from the writings of Hengstenberg ; he may copiously supplement the voluminous

references in the historical, poetical, and prophetical books enumerated by Keil, which presuppose just so complete a political and ecclesiastical organization and history as is sketched in the Pentateuch ; with Renan, he may expatiate upon the singular unity of style ; or with the great apologetes of all ages of the Church, he may work out the irresistible conclusions to be drawn from the express statements of the books themselves, or from the undisguised beliefs of Christ and His apostles. Another variety of evidence insufficiently insisted on is, the nature of the Mosaic religious system itself. Mosaism is its own best witness.

Speak as we may of the Mosaic *authorship* of the Pentateuch, it is more appropriate to speak of the Mosaic *transmission* of Mosaism. That fascinating assemblage of civil and religious precepts is expressly said to be of supernatural origin ; that gorgeous ritual, if the assertions of the Pentateuch be heeded, is the gift of the God of Israel ; that particularizing rubric describes itself to be divine in communication and divine in structure. To such pretensions a peculiar method of proof attaches itself. It may be asked whether there is credible support for a belief in this transcendental origin ; it may be discussed whether there are reasonable grounds for alleging that the Levitical institutions were indeed divinely promulgated. Now, in inferring the superhuman origin of the whole Bible, Mr. Henry Rogers¹ has made most powerful use of the thesis that the Bible is not such a book as man would have made if he could, or could have made if he would. May not the verisimilitude of the superhuman source of Mosaism appear from a parity of reasoning ?

Let the glance, for example, be concentrated upon the Sinaitic legislation, not as a singular political experiment, nor as a brilliant and efficacious scheme of practical ethics, but solely as a religious system. Its success was as marked as its aim was ambitious. It declared itself divinely originated ; no unworthy details belied the declaration. Tested by the grand purpose of all true religion—the adaptability to evoke, cultivate, and satisfy the spiritual cravings of mankind—it has no

¹ "The Superhuman Origin of the Bible," Congregational Lecture for 1873.

superior but Christianity. Truths of the highest import it effectually conveyed to fishermen, herdsman, and shepherds. If the soul was athirst for God, the living God veiled Himself in 'cloud in the Holy of Holies ; if the distressed conscience cried out for release from hereditary taint and weakness, the rites of purification told their inspiring tale ; if in agony at the near presence of the Almighty, the request was preferred, "Talk not Thou with us lest we die," the mediation of the priesthood was the soothing reply ; if sin called for atonement, trespass urged restitution, gratitude prompted self-surrender, trust desired fellowship, each of these instincts of the religious life found vent and satisfaction in the several sacrifices ; if companionship, nay, national participation in spiritual matters seemed the appropriate method of worship, the various festal seasons recurred as the year rolled its course, and a whole people rejoiced at renewed exemption from death at the Pass-over, brought their tithes and first-fruits at Ingathering, humiliated themselves on the Day of Atonement, or waved their palms at the Feast of Tabernacles. Mosaism inspired awe without despair and trust without presumption. Under its regenerating influence, the mighty God became an exalted friend, a righteous judge, a benignant king. It was a notable realization of a beneficent ideal ; and by means of the magnificent and varied cultus which it enjoined under most tremendous sanctions, all those perplexing yet invaluable contrasts of profound spirituality—of time and eternity, death and immortality, a God angry and reconciled, lust and aspiration, sin and salvation, unacceptable service and possible sacrifice—entered into common thought and tinged common experience. Those divine injunctions to Moses supplied a theology, a cultus, and a moral philosophy ; therein God revealed Himself to man, man bowed before his Maker, and, under the influence of such exalted intercourse, the very relations between man and his neighbor were ennobled. Indeed, if the great things for man to *know* are the existence of superhuman powers—nay, of an unchangeable God of adorable attributes—the fallen state of man and his personal incapacity of restoration, the possibility of forgiveness and of a renewal to some degree of the intercourse of Eden ; if the great things for man to *do* are to fear, to repent, to revere,

to forsake evil, to cleave to good—then must this Hebrew faith be regarded as astonishingly complete in the faculty and knowledge it was able to impart. Upon such a religious aid the 119th Psalm is not too lofty a panegyric, the Lamentation of Jeremiah is not too bitter an elegy. Complicated this system undoubtedly was, but exquisitely impressive; gorgeous but appropriate; sanguinary but merciful. So, too, whilst its general purport was patent to the simplest, there was food in its details for the life-long meditation of the wisest and greatest; and if at first sight the multitudinous rites seem to blend disastrously a debasing materialism with an exalted conception of a Deity, Who designates Himself the “I am,” and Whom nothing in nature nor in human thought can symbolize, a nearer vision demonstrates that the carnal has its deeper significance, and that wine and oil, blood and flesh, flour and incense, unleavened bread and first-fruits, running water and the ashes of a heifer, are but the body of a soul of fine religious import, convincing of sin and assuring of forgiveness, objectifying self-surrender, and conveying a holy joy of fellowship, now justifying an individual and now sanctifying a nation. The round of sacrifices, daily, weekly, monthly, festal, it is true, is simply appalling to the cursory inquirer of modern times. How seemingly subversive of any refinement in religion! Yet survey more closely, and it is as if a laughing landscape has suddenly burst by the sun’s enchantment from rolling mist and dense darkness. The fact is that this intricate and protracted ritual was a splendid provision for all the deepest needs of man; omit any single feature, and that provision would have been irretrievably marred. “In that sacrificial constitution were portrayed for any man who believed in God and in the possibility of His revealing Himself, all the essentials of true religion. As the Jew regarded the sacred structure of the Tabernacle, the eye whispered to the soul that God Most High dwelt in the midst of his nation, and might be approached in worship. As his attention was engrossed by the gorgeous vestments and busy ministrations of priests and Levites, he would recognize a divinely appointed organization, by whose mediation and intercession divine worship might be beneficially and innocuously conducted. In the performance of the rites of purification, the

truth was palpable, that those hereditary taints and personal faults which might intelligibly hinder approach to God, however disqualifying in their nature, might be neutralized. At the same time, the divinely arranged series of animal and bloodless gifts would deliver the messages with which they were divinely laden, the welcome and inspiring messages of the forgiveness of sins, and a possibility of uninterrupted, or only momentarily interrupted, fellowship with God. In the sin-offering he recognized the divinely arranged instrument for obtaining forgiveness for sins of weakness and ignorance ; in the trespass-offering, a fitting retribution for frauds against God or man ; the burnt-offering was an aid to consecration, the peace-offering a channel of communion. In short, the Mosaic injunctions, if their essential significance be regarded, brought into satisfactory prominence the consolatory and instructive truths of the divine nearness and approachableness, of human sin in its stupendous effects upon the physical nature and conscience, together with the possibility of atonement, forgiveness, and the restoration to divine favor. The Jew who could devoutly say, ' I believe in Jehovah, Maker of heaven and earth,' could add to his creed the further articles, ' I believe in the shechinah, the Tabernacle and priesthood, the communion of saints, and the forgiveness of sins '—no inconsiderable spiritual equipment !¹ Was it any thing marvellous, then, that under this Levitical doctrine the beautiful blossom of spiritual desire bore in men like David, Isaiah, and Daniel, the rich fruit of holy content and aspiration ?

Now, this completeness as a religious system has an immense argumentative force. Whence did the system emanate ? Dr. Kuenen says, from the Jewish priesthood by a natural course of development. This massive and rotund cultus was evolved, in his esteem, during a lengthy struggle of the ecclesiastical intellect, the fittest products of which survived. Is it too much to affirm, in view of the extraordinary unity and adaptation of the Mosaic worship, that the common-sense of Christendom will be unable to see in this hypothesis any adequate solution of the question of origin ? For, be it remembered, we have not to

¹ " The Scriptural Doctrine of Sacrifice," pp. 108, 109.

deal with a complex and apparently contradictory mass of facts, such as is visible in the world of nature, defying scientific classification and baffling the shrewdest and most patient by all sorts of intermediate varieties ; we have not even to do with a heterogeneous assemblage of principles, the accumulation of many ages and many traditions, like modern law, where equity conflicts with the written code, precept wars with precedent, and unity only exists upon the assumption of many a legal fiction ; the religious precepts of Mosaism form so concatenated a whole that the omission of any part causes the rest to lose cohesion. Mosaism is the manifest product of design. Surely such a cultus, regarded in itself and in its influence, it was totally out of the power of such a priesthood as the Jewish to produce. Even if Ezra and Ezekiel be thrown into the list of authors, the problem is but slightly lessened, for unless some supernatural gift be ascribed to them (and if ascribed to them, why not to Moses ?), all we know of both Ezekiel and Ezra negatives the possibility of their authorship. Besides, the motive must be borne in mind which is supposed to have prompted the origination of this astounding scheme. That motive was not religious zeal, nor yearning compassion for sin-stricken humanity, nor spiritual perception of the deepest cravings of the soul, but—*ecclesiastical ambition*. Now, it were doubtful enough whether any number of Jewish priests at their best, actuated by a mighty philanthropy, by the sedulous study of human woes and needs during centuries, could have framed any such scheme as the Mosaic, even if they were persistently aided by the flower of prophecy, assumed of course to be merely human thinkers, not divine mouthpieces ; how overwhelming grows the doubt when these priests and prophets are stated to have labored solely for power and place ! If Mosaism did so result, the critical school has scarcely furthered its desire of eliminating the miraculous. This Levitical legislation uninspired prophets and priests *could* not have constructed if they *would*.

And that the Mosaic cultus could not have been devised by priests, whether animated by ambition, as Dr. Kuenen thinks, or by benevolence, as his hypothesis seems to demand, becomes the more assured the more minute the introspection. There is a strengthening of the impression of completeness consequent

on regarding closely. Let a single point be selected in illustration—the law for the removal of the contamination of death.

It was one of the peculiarities of the Law that a dead body rendered every thing and every body in its neighborhood unclean—that is to say, unfit for human use or divine service. To be in a tent at the time of death, to enter a tent where a corpse was, to touch a dead body or a grave or a bone, was to contract uncleanness. The very pots and pans where the ghastly visitant had entered were defiled, and purification was effected by a sprinkling with water mingled with ashes, expressly prepared by the sacrifice of a red heifer. “The sons of Israel brought to the son of the high priest a spotless red heifer, which was slaughtered without the camp as a sin-offering. The officiating priest (still without the camp) then sprinkled some of the blood collected in the process of slaughter seven times toward the Tabernacle, and burnt the carcase with the skin, blood and dung, throwing cedar wood, hyssop, and scarlet wool into the fire. The ashes were collected by one who was ceremonially clean, and preserved in a clean place for subsequent use. When any one presented himself for purification, the following ceremony took place: Some of the ashes thus prepared and preserved were mixed with living, that is to say, running or spring water, and a legally clean man taking a bunch of hyssop and dipping it in the water on the third and seventh day after defilement, sprinkled the tent and the vessels and the persons it contained. After washing and bathing of the person, the unclean became pure in the evening.”¹ Now the important thing is that the significance of this astonishing ceremony was made perfectly clear to the Jew; further, admirable as such a quarantine would have been from a sanitary aspect, that meaning was a purely religious one. One of the most elementary, profound, and affecting truths was thereby conveyed. To put the matter briefly, all purifications being declared to be the removal of unfitness for service arising from original sin, every applicant for these detergent ashes might know that the necessity for their use lay in some strange

¹ “The Scriptural Doctrine of Sacrifice,” p. 74.

stain connected with death ; the process might arouse uncontrollable thoughts

Of man's first disobedience, and the fruit
Of that forbidden tree, whose mortal taste
Brought death into the world.

This salutary recollection became the more certain and impressive from the superadded symbolism. In the preparation of that holy water, there was not a detail which had not its pregnant suggestiveness. The ashes were the ashes of a red heifer—of an ox (and not of a pigeon, or a goat, or a lamb), because so deep a dye must be removed by the most costly sacrifice known to the Law—of a young ox upon which no yoke had ever come, because the life must be of the freest, with its vital energy intact—of a heifer, because the female represented the prolific or fruit-bearing, and thus intensified the idea of full life—of a red heifer, to continue the same idea, red recalling to the Oriental the conception of copious and ruddy vivacity. No blemish was to be upon it, that the physical purity might be apparent. The heifer was brought by the elders to the priest, inasmuch as the taint to be neutralized was no individual stain, but all-pervasive and wide as the nation. The son of the high priest, such an act being improper for the priest himself, superintended the slaughter, since this was an act peculiarly appertaining to him who was at once the highest representative of the nation and the most amply accredited ambassador from the Most High. Being expressly designated a sin-offering, the customary ritual of slaughter was gone through. The heifer was duly presented by the elders to testify that it was they as the national surrogates who approached the Almighty in the person of His priest, beseeching aid ; their hands were forcibly laid upon the victim's head as a symbolic devotion to the purpose in view ; the blood (the means of atonement) was sprinkled toward the Tabernacle (the place where God dwelt) seven times (the complete number), to plead with mightiest power in the one revealed way ; then, as with all sin-offerings for the entire congregation, the carcase to the skin and faeces was burnt without the camp ; it was not eaten by the priests or the elders, because this was the solemn vicarious submission of the whole animal to

death and destruction ; the ashes were collected as the quintessence of the whole ; lastly, these ashes, possessing an additional purifying strength from the remains of incorruptible cedar, detergent hyssop, and scarlet wool, were mixed with running water to emphasize the cleansing by water and the cleansing by the substituted life. Such are some of the details of but one unique rite. And of such details the Leviticus is full. By expressly interpreted injunctions, numerous and minute, by an eloquent and highly varied symbolism, by gracious sacrament, this Jewish religion could consecrate the highest and rectify the lowest. Could such a faith have originated in the ambition of priestcraft ? Priests who could plan and mature such a rubric would not only have displayed a richer spiritual faculty than "Zarathustra, Sakya-Mouni, and Mahomet," but even than Augustine, St. Bernard, and Luther.

It is also not unimportant in this connection that the Law depreciates the spirituality of its priesthood. Birth alone was insufficient to entitle to entry into this privileged class. Neither personal claims nor the will of the majority, not even favoritism, could ensure entrance. Admission followed upon birth *and consecration*, and consecration was wholly a religious proceeding. If an Aaronite suffered under any physical defect, he could by no possible means be legally inducted into the sacred office. Nor was it legally possible for a priest to ply his vocation for mercenary ends ; a limited means of support was his right, gained without solicitation and guaranteed without labor. Further, high as was his position and spotless as was his sanctity, both sanctity and position were purely relative. The Law seems to have taken pains, if the expression may be allowed, to assert this relativity of holiness. Two of the most prominent features in the rite of consecration were a purification of the whole body and a sin-offering, the former to counteract original and the latter personal sin. The ritual of the Day of Atonement painted the same truth most brilliantly. The solemn service commenced by an entire purification on the part of the high priest ; he next proceeded to the Altar of Burnt-Offering in a white robe, as if less than a common priest, until he had made "atonement for the priests," "in all their sins ;" the priestly and golden garments could only be assumed after the

sprinkling of blood before the mercy-seat, and solemn prayer for the forgiveness of his own sins and the sins of his kinsmen. There is not a single precept in the Law which could favor that first principle of priestcraft, "I am personally holier than thou." The sole guarantee of ecclesiastical purity is the divine election. What becomes, then, of the hypothesis of ambition? That priests should arrogate to themselves exceptional purity, exceptional birth, exceptional right of office—these are no strange things; but that priests, to exalt themselves, should describe themselves as debased and their goodness as attributed, certainly is unusual.

Another important series of facts antagonistic to this latest critical hypothesis, is that supplied by the continuity of Scripture. The Patriarchal age prepared the way for the religion of Sinai, and that in turn merged into the teaching of Christ and His apostles, but the stages in the development are marked by such remarkable links of connection, the agreements and differences are so unexpected, that it may be unhesitatingly affirmed these reputed ecclesiastical projectors could never have imagined them. Let the Sinaitic faith be first compared with the Patriarchal. That designing priests might desire to palm off their individual contrivances, whether ambitious or fanatical, as the daily practice of great men, and of a revered antiquity, would be nothing wonderful; the wonder is that such men should have palmed off such practices. Things which the shallowest could see to be favorable to their plans are omitted; things that no amount of ingenuity can show to be otherwise than prejudicial are inserted. Intellectual might is affirmed in one breath to deny it in the next. The phenomena of worship in the two ages are sufficient proof. These priests desire to constitute the Temple the one legitimate place of service. They represented the patriarchs as worshipping when and where they would; they wished to surround the Altar of Burnt Offering with the halo of an exceptional divine presence; they describe Abraham and Isaac and Jacob as erecting altars at their own sweet will with signal success; they aimed at usurping the sole priestly dignity; they depict every father of a family as the priest of his household, every prince as the priest of his tribe; their purpose was to hold in subjection by a varied and imperative ritual, that purpose

they do not pretend to have been familiar to their greatest ancestors, who knew but one kind of sacrifice available at any time and for the expression of any religious emotion ; so, in this earlier dispensation supposed to have been deliberately composed in order to invest Leviticism with authoritative precedents, not a single word is said of the necessity or method of atonement. But this argument gathers irresistible force when the Sinaitic dispensation is compared with the Christian ; if there are those who see in the records of the Genesis nothing incompatible with a skilful and ingenious adaptation, nothing more than an imaginative history written with an ecclesiastical bias, it will scarcely be maintained by any one that these clever priests of the captivity not only harmonized the past with their claims, but adroitly forecast the future. Yet a marvellous continuity undoubtedly exists. As the immature picture of the artist has its subtle links with the completed portrait as well as with the first rough sketch, this foretelling that and that dignifying this with apotheosis, so the teaching of Christ and His Apostles bestows the crown of immortality upon defunct Mosaism. Nor are the witnesses to continuity difficult to array. They consist of all those elements of ritual, the likenesses amidst unlikenesses so indicative of a common author, which must have remained totally inexplicable had not Christianity appeared. Very much of the meaning of Mosaism lay bare to the intelligence of any spiritually-minded Jew ; he knew that this elaborate religious constitution was a ritual of the symbolic class ; he also knew that so much of the significance of the symbols employed was disclosed as conveyed certain truths of the highest importance in eliciting and developing a truly spiritual life ; he even recognized in these symbols a series of sacraments, which by the mercy of God became the channels of many a blessing ; but there still remained many things unsolved ; there still remained many perplexing and eluding principles and details, displaying a very visible relationship he would confess, but very like the medley of a cipher the key of which he did not hold. Wherever he looked, for example, there was discernible a most appalling insufficiency in these rites. To look at the religious rites alone : the Tabernacle was called the dwelling-place of Jehovah, it was in the ultimate resort

a structure of wood and skin ornamented ; the priesthood was to be regarded as the peculiarly holy servants of Deity, their righteousness was imputed and their service official ; or coming to the purifications and sacrifices, what power had water to palliate the curse, what efficiency dwelt in animal blood to atone sin ? Such reflections must have presented amazing difficulties to the thoughtful, unless one hope presented itself, that these things were shadows of coming events. But immediately the Jewish and Christian theories are compared, these stumbling-blocks are the very things which prove most conclusively the fact of a common architect. The priesthood has its rationale in the " Priest forever ;" the Tabernacle in the Incarnation ; the atonement by blood in Calvary ; the non-dissected feast in the great Paschal Lamb ; the Passover in the daily appropriation of the merits of the crucified Jesus ; the Feast of Ingathering in the dispensation of the Spirit ; the Feast of Tabernacles in the rejoicing of the saints through Christ. And these resemblances, which must have been preordained, are innumerable. Christ is the missing key ; the divine Foreknowledge supplies the idea which enables the onlooker to see the unity of plan in charcoal sketch, immature painting, and portrait rivalling life. In a word, the phenomena of types and antitypes establish a most conclusive proof of intimate connection—a connection which Jewish priests *could* not have invented if they would, and *would* not if they could.

To the critical school the student of Mosaism owes much. He has gained from its leading writers a more realistic picture of the Jewish history ; he is deeply indebted to them for many an archæological detail ; he has been enabled to enter more sympathetically into the momentous religious struggles of those early days ; he has been helped to a more vital appreciation of contemporary religions ; the vast influence and the heroic sufferings of the prophets have become more sublime verities ; especially has he been laid under profound obligation by learning, with a vividness both suggestive and novel, to how stiffnecked and idolatrous a people the Sinaitic revelation was made. There is another element of indebtedness : the critical school has pushed the rationalistic theories of Mosaism to their logical issue, and thereby facilitated disproof.

ALFRED CAVE.

THE IDEA OF CAUSE.

THE philosophy of Descartes has at least one great defect, that it does not explicate and bring out into distinct consciousness the idea of Cause. By making the essence of Matter to consist in passive and inert extension, and the essence of Mind in thought, which is supposed to have no capacity of going out beyond itself, so that it can act only within its own limited sphere, his theory leaves the outer world of activity and change, in which we live, without any explanation except through the incessant action of its Creator. Some of his immediate followers and successors, among whom were Spinoza, Malebranche, and Leibnitz, partially remedied this defect. Yet neither of them completely removed it, because they did not grasp the whole significance of the word, or distinguish the various meanings and applications of which it is susceptible. Let us attempt to supply, at least in part, this deficiency ; for among all the metaphysical "elements of knowledge," I know of none which is more essential to clearness of thought, more varied in its meaning and application, or more determinative, so to speak, of the whole character of our philosophy. Tell me what you know or believe about Causation, about the origin and nature of the idea, and its relations to Matter and Mind, and I will tell you whether you are Idealist or Materialist, Positivist or Transcendentalist, Fatalist or a believer in Free Will, Theist or Atheist.

As the first, and perhaps the most important, step towards a full exposition of the subject, we must go back to Aristotle, whose acute and comprehensive intellect supplied so many of the distinctions, and so large a portion of the terminology, of

both ancient and modern philosophy. He pointed out four distinct meanings of the word, or four different sorts of Causes, upon which the mind inevitably stumbles when it tries to ascertain the origin and nature of any phenomenon. These may be passed over here very briefly, as they have recently been discussed in this REVIEW by President McCosh.

The word Cause was originally used in a very wide sense, corresponding to the Latin *causa*, Italian *cosa*, French *chosc* ; it meant *the thing*—more definitely in German, *Ursache*, the *primitive* thing—which is transacted, spoken, or contended about. The Greek term *αἰτία* merely adds that it is the thing which we accuse or assign as the origin of the phenomenon in question. Aristotle distinguished four kinds of such “primitive things” or Causes, which account for the existence of what we are inquiring about. The Material Cause is the original matter (German, *Urstoff*, primitive stuff) out of which a thing is made ; the Formal Cause is the peculiar texture or internal constitution (*forma informans*, the essence) which makes any particular substance what it is, or gives to it its distinctive character ; the Efficient Cause corresponds to our modern use of the word, as it signifies the maker or author of a thing, that which really produces it ; while the Final Cause is the end or purpose, the intention, for which it was made. Thus, the Material Cause of the paper on which I am now writing is the pulp of rags out of which it was made ; its Formal Cause is the peculiar texture given to it, which entitles it to be called *paper*, rather than linen or *papier maché*, which might be formed out of the same material ; its Efficient Cause is the paper-maker ; and its Final Cause is to be written upon.

To understand the first two of these designations we must go back to the old Aristotelic distinction between the Matter, ἡ ὕλη, and the Form, τὸ εἶδος. The primitive Matter or substance from which all things were constituted, because chaotic, homogeneous, and wholly indeterminate, is not regarded by Aristotle as actual, but only as potential, being. Because it is every thing in general, it is as yet nothing in particular. It first becomes actual when it receives a definite “Substantial Form,” τὸ τί ἦν εἶναι, by virtue of which it becomes a distinctive or peculiar substance, of which this Form is the *essence*.

Then first it acquires its special properties or attributes, which are the manifestation of its essence. Thus, it is of the essence of iron to be metallic, magnetic, malleable, etc. So, also, sound is the Matter of speech, articulation is its Form. Protoplasm is the Matter from which the living organism is constituted ; the cell or cellule, and the distinctive tissues evolved from it, is its Form. We thus come to a distinction which is vital in the Kantian philosophy. Intuitions or Percepts are the Matter of Knowledge, which the Forms of space, time, unity, cause, etc., first render thinkable or conceivable by the understanding. What the Germans call *der Inhalt*, the Content or Matter of the cognition, is first *thought*, when it receives its logical Form. Hegel conceives the Essence (here synonymous with Form) as that internal constitution of things, of which their outward qualities are only the manifestation. Hence, when we propose to study the Essence, we regard the outward visible being, of which the senses directly take cognizance, as only the rind or veil behind which the Essence is concealed. Hence, again, all things have a sort of double being in thought, of which the outer one is merely apparent or inessential, while the inner one, the real being or Essence, is discerned only by reason.

The next pair of epithets applied to the word Cause, Immanent and Transeunt, which frequently recur in the writings of Spinoza and other pantheists, originated with the Schoolmen and logicians of the Middle Ages. The former, Immanent (from the Latin *in* and *maneo*, inbiding or indwelling), is conceived as in action only on and within the substance in which it exists, but as operating there continuously ; while a Transeunt Cause is a living and conscious energy, going forth beyond that in which it inheres, and thus acting on other things *ab extra*, from without, though efficient only at intervals, on specific occasions. Thus, reflection, desire, attention, and grief are immanent properties of mind, affecting or determining the current of thought certainly, but producing no effect outside the consciousness of the thinking person ; whereas the will, when brought into exercise as a distinct volition, goes out beyond the mind to the body, and moves the arms, opens the eyes, or shuts the fingers. Cohesion is an immanent

property of a lump of matter, merely binding its particles together ; while the magnetic or electric force seems to transcend the limits of the substance wherein it is manifested, and to produce motion or change in what is external. We can now understand what Spinoza meant when he taught that "God is the Immanent, but not Transeunt, Cause of all things."

The distinction between these two is obviously the same with that pointed out by Aristotle between Formal and Efficient Cause. A Formal Cause is always Immanent ; an Efficient Cause is always Transeunt. In the ordinary meaning of the word, the former is no Cause at all, since it does not produce any outer action or change at a particular time ; but manifests only the permanent relation of the essence of a thing to its attributes. On the contrary, an Efficient Cause, properly defined by Aristotle as that, *ὅθεν ἡ ἀρχὴ τῆς κινήσεως*, which is the origin of movement, produces at a given moment a physical change in the outer world. Science teaches us, that all physical change is resolvable, in the last analysis, into the beginning or the cessation of molar or molecular motion, which requires space. Hence the German word to express the *origin* of any phenomenon is *Ursprung*, the primitive *spring* or movement. The Principle of Causality is, that *every physical change*—that is, every event in the material universe, every origination or cessation of motion—*must have a cause*. Hence the Principle is not applicable to objects that exist, if considered merely as existing, and not as changing ; and much confusion and unsound reasoning have arisen from the attempt to extend it to them. I cannot infer merely from the present existence of a stone or an animal that it must have had a Cause ; for all I know, it may have existed forever. But if we know that at some definite epoch it *began* to exist, then we say with absolute certainty that that *beginning* of its existence, as an event, must have been produced by something foreign to itself ; or, more loosely speaking, that the event must have had a Cause.

Hence, that primordial condition of the material universe, in which the evolutionist beholds "the promise and the potency" of all subsequent change and life,—whether it be, according to Democritus and Lucretius, an indefinite multitude

of disconnected and homogeneous atoms, or, according to the modern nebular hypothesis, a primitive fiery mist,—if not subjected to the action of an Efficient and Transeunt Cause exterior to itself, must have remained forever dead, motionless, and unchangeable. According to the hypothesis, the only Cause present to it must have been a Formal and Immanent—that is, an inherent or intrinsic—Cause ; and the only result of such causation, as we have seen, is permanency of state, the eternal and changeless manifestation of the same attributes. It is not enough to say, what physical science has at last satisfactorily demonstrated, that there is no spontaneous generation of life ; but we must add, what science long ago affirmed, that there is no such thing as the spontaneous generation of motion. As long as the universe was without form or definite structure, and also without an Efficient Cause, any *change* of its state was impossible. Before “the Spirit of God moved upon the face of the waters,” no winds agitated the surface of the “dark illimitable ocean,” no tides heaved its mass, no waves broke upon its silent shores.

Again, as the Principle of Efficient Cause concerns only the origination of movement or physical change, which requires space, it is not applicable to the phenomena of pure intellect, which are unspatial. Putting aside the sensations and feelings which are of a mixed character, as they arise from the connection of the mind with the body, it is evident that the succession of what may be called *pure* states of consciousness is regulated by inherent and spontaneous laws of thought and the association of ideas, and that these laws are wholly independent of physical causation. We have now passed into a new world, the contradictory opposite of the world of matter, since the two have not a single feature in common. I cannot properly ask for the *causes*, but only for the *reasons*, of my desires, my course of thought, my thick-coming fancies, my convictions, my volitions. In reverie and dreaming, in all conscious meditation that is not regulated or checked by the action of the senses—and such evidently constitutes the larger portion of our intellectual life—the river of thought windeth at its own sweet will. Passively I may wait and watch its ceaseless flow, or I may actively interfere and hem its current, or deflect it into a

different channel. But the Reasons for such interference, or for any other volition, are not *causative* in their nature ; that is, they do not *necessarily determine* what particular Consequent shall follow, or even if there shall be any Consequent whatsoever. A variety of Reasons may be simultaneously present in consciousness, like so many suitors in court, each soliciting a verdict in his own favor to the exclusion of the others, because each has his own interests to subserve. The autocratic Will sits as supreme judge in that court, and is always more or less arbitrary in its decision. Generally, it is willing to hear argument, that is, to listen to the Reasons, and estimate their comparative weight and relevancy ; though, like too many other judges, it is often wrong-headed and decides for the weaker party, even when conscious that the preponderance of reasoning and testimony is on the other side. Such is often the case when duty is pleading against temptation, though the culprit judge is fully aware, that if conscience had might, as it has right, it would govern the world. Common people often say of a judge thus acting, not that he is necessarily corrupt, but that he is blind and *wilful*, thus emphasizing that free and arbitrary character of the human will which is here in question.

As the strongest reason often cannot command volition, it frequently fails to produce assent. The relation between argument and volition, between the inferences of the understanding and the determination of belief, is far from being compulsory or certain. As Dr. Newman remarks, "Sometimes assent fails, while the reasons for it, and the inferential act which is the recognition of those reasons, are still present and in force. Our reasons may seem to us as strong as ever, yet they do not secure our assent." Hence, in sound logic, the *ratio cognoscendi* is clearly distinguished from the *causa fiendi* (*i.e.*, the Efficient and Transeunt Cause), though the two are arbitrarily confounded by Leibnitz in his Principle of the Sufficient Reason. The *causa fiendi*, as we have seen, is that which *makes* the event happen, and therefore never fails to be an Efficient Cause, though it may not be *sufficient* to produce the whole end in view ; for it may be overridden by a more potent cause of the same nature. But as we are here in the

kingdom of physical or mechanical necessity, the weaker cause in such a case is merely overridden, but not extinguished, by its more powerful competitor ; for the efficiency of the two is there compounded, as in the parallelogram of forces, and the resultant effect is unlike what it would have been if either had acted separately. But when different reasons, or motives, as they are commonly called, are competing for our assent or volition, though they may be almost equally balanced at the outset, so that choice between them may be long delayed in order to have time for consideration, yet when the decision is at last rendered, the conquered motive *is* extinguished or absolutely put aside, and the resultant action is precisely what it would have been if its motive had been the only one present to consciousness from the beginning. This fact alone, it seems to me, is demonstrative of the freedom of the will ; and when united, as it always is, with the sense of responsibility for our conduct, the philosophical question is settled forever without appeal.

In truth, the word *ought* would cease to have any intelligible meaning, if my will were as necessarily determined by motives as a ship's course at sea is by the winds, so that conscience could no more reproach me than the ship for sailing in the wrong direction. The mind of an insane person has lost its rudder ; he *is* necessitated ; he *cannot* steer his course aright. Hence, though he becomes a homicide, we do not punish or even blame him ; we only shut him up, so that he may do no farther harm. Mill, Huxley, and Spencer would have us believe that all the world are mad, and therefore that the tribunal which sends a convicted assassin to the gallows really commits murder. They virtually preach the innocence of wrong-doing, thereby rejecting the testimony both of conscience and consciousness, and bringing the highest interests of humanity into peril. Could they convince the ignorant multitude of the truth of their theory, this world would become a hell. But the unsophisticated common-sense of mankind rejects the dogma with disgust.

In order to defend and illustrate his doctrine of "continuous creation," which is only the theory of "immediate divine agency" carried out to its farthest logical consequences, Des-

cartes revived the Scholastic distinction between a Cause *secundum esse* and a Cause *secundum fieri*. An effect produced by the former of these holds good only so long as the cause continues to operate, but vanishes as soon as this ceases to act, for the effect has in itself no independent principle of being. *Cessante causa, cessat ipse effectus*. Such is the relation of light to the sun, and of the circulation of the blood to the beating of the heart. It is in this way, according to Descartes, that the universe, including even man himself, depends upon God; for this alone can properly be called creation. On the other hand, a *causa secundum fieri* expresses only the relation of the human artificer to the product of his labor, which he merely fashions, but does not create. An architect is needed to build the house, and a sculptor to shape the statue; but this task once completed, the workman may depart, and his work will remain.

Evidently, this distinction was first applied through a jealous concern for the theological dogma of the dependence of all things upon God. But the argument has a double edge, for the excellence of the work may seem to be impeached by maintaining that it cannot be made durable except through the constant care and aid of its author. Also, the doctrine comes perilously near to Spinozism. A Cause *secundum esse* seems at first to differ but little from the Formal and Immanent Cause of the pantheist, and continuous creation to be only another name for emanation. Yet the distinction between the two is really wide and important. In the Cartesian theory, the Deity is still outside of his work, operating upon it *ab extra*, and therefore continuously manifested as an Efficient Cause, and not merely as Immanent. Spinoza held that God, as the ultimate ground of all things, is the eternal, infinite, incessantly active physical Force, from which all being necessarily proceeds, just as from the very nature of a triangle it follows to all eternity, that its three angles must be equal to two right angles. On this theory, indeed, all things do not properly *emanate from* God, but are rather *immanent in* Him. All physical objects and events are contained *in* His infinite extension, just as all thoughts and souls (for the Spinozan *soul* is only a succession of thoughts) are merely expressions or manifestations of His infinite and absolute thought. The Scholastic

and Cartesian doctrine of a Cause *secundum esse* and a continuous creation was probably suggested by the orthodox doctrine of the Trinity, according to which there is but one divine substance in the Godhead, and this one is manifested from all eternity in three equal and coëternal Persons. It is really an effort to conceive the inconceivable, by indicating typically what theologians call the eternal generation of the Son, and the eternal procession of the Holy Ghost from the Father and the Son, neither ever beginning to be, but both being constant and eternal manifestations of one God. Philosophy under Descartes thought to emancipate itself altogether from the influence of the Scholastic theology. But it did not entirely succeed in doing so ; for it was long ago remarked, that it is not as easy to get rid of all one's beliefs as it is to burn one's house down. But there is a foundation of truth in the Cartesian doctrine, which commends itself as much to the heart as to the head of the Christian thinker. Descartes rightly represents creation, not as one act begun and ended at a definite time, but as a continuous putting forth of energy, a constant manifestation of divine power, so that, if it should cease for a moment, the universe would instantly lapse into the nothingness whence it was drawn. All things are, so to speak, *re-created* at every instant ; for to suppose that anything could, of itself, continue in being after it was once created, would be to deny its finite and limited nature, and to render it for the time independent of its Creator. Compare this lofty and inspiring conception of the universe with the dreary mechanical theory of the infidel Atomist, who believes in a mud universe, built up and sustained solely by the forces immanent and inherent in that mud, self-shaped and self-evolved through an endless evolution of living forms, from the animalcule up to man, without any external power or agency whatsoever. For this is the upshot of the theory, try to sublimate it as you may. The atoms of Leucippus and Democritus, or the "primitive fiery mist" of the modern evolutionist, homogeneous and structureless throughout, are nothing but the primary constituents of mud ; and those who behold in them "the promise and the potency of every form of life" are really idolaters bowing down before a Mud-Fetish.

The theory of immediate divine agency, as taught by Male-

branche, involves the consideration of what are called Occasional Causes. These are only the uniformly attendant circumstances which indicate the occasion or time when a particular event may be expected to happen, though not exerting any causative influence upon it whatsoever. In many instances, what is called the Occasional Cause is merely a concomitant effect of the same power or agency which really produces the event in question. Thus, the falling of the mercury in my thermometer below thirty-two degrees is the occasion which leads me to expect the freezing of water, though the thermometer certainly does not act upon the water, but is itself acted upon by the same power or force which produces the congelation. In other cases, the two phenomena may occur in immediate succession, though produced by agencies entirely independent of each other, the only connection between them being simultaneity of operation. In either case, the Occasional Cause is only a *ratio cognoscendi*, which leads me to expect what will soon happen from an independent and probably unknown cause.

In like manner, what is sometimes called an Instrumental Cause is, properly speaking, no Cause at all, as it is entirely passive, the action transmitted through it originating in some force or agency lying further back. Thus, the force or active agency by which a stone is moved does not reside in the stick, or even in the hand, which pushes it, but in the conscious and intelligent Mind or Will, which thrusts the hand or stick with a preconceived and definite purpose and a conscious effort. The instrument through which the causal agency is transmitted may be one, or many. There may be a chain or series of intervening links between the primary application of efficient force, and the observed result of motion or change at the other end of the line. But each of these links is passive, because incapable of originating change either in itself or in that which follows. It merely transmits mechanically the initial impulse.

Lastly, we have the conception of Physical Cause or Law, which has become so prominent in the science of our own day. Here, by the admission of the physicists themselves, the relation contemplated is not that of Cause and Effect, but of Antecedent and Consequent. If the sequence, so far as observed,

has been invariable, so that we look with perfect confidence for the subsequent phenomena to follow, then the invariable antecedent is called a Physical Cause, and the uniform conjunction of the two phenomena in time is styled a Law of Nature. Thus, friction is always followed by the evolution of heat, and if two drops of water or mercury are brought near each other, they invariably rush into one. Then friction is said to be a Physical Cause of heat, fire of the melting of wax, etc.; and it is said to be a Law that the two phenomena should be thus conjoined. But no actual *nexus*, no real union of the two events, apart from this simultaneity of their occurrence, ever has been, or ever will be, discovered. No exertion of force or power can be detected by the senses; we can observe nothing but the external phenomenon, the thing done, but never the power which does it. It was long ago remarked by Kant, that the senses can give us only a succession of isolated phenomena; and that any synthesis of them, any grouping of them together by a real or fancied bond of connection, must be thought out by the imagination or the understanding. Sense presents the separate beads of perception in a series, only one at a time; thought strings those beads together. An invariable antecedent is a sign or herald—an indispensable condition, if you will—of the phenomena which it precedes. So atmospheric air is an indispensable condition of human life, and space is an indispensable condition of motion. But no one imagines that the space generates the motion, or that air creates life. A constant antecedent, as that which leads the mind to expect a certain event, may be regarded as a *causa cognoscendi*, or as an Occasional Cause; but it certainly is not the *causa fiendi*, or that which *makes* the event happen, whether we expect it or not.

A Law of Nature is only a general fact, or a statement comprising under it many individual facts. Then the statement of such a Law does not account for or explain the phenomena included under it; it only describes them. The process of thought by which we pass from a Physical Law to an individual case happening under it is one of deduction, or logical inference. Because uniform experience has shown that *all bodies* tend to fall towards the common centre of gravity, therefore *this body* thus tends to fall. The statement of the law, there-

fore, is that which *makes us expect* that the individual event will happen ; and this, by a very natural confusion of thought, is often mistaken for the Cause which *makes the event happen*. But the relation in the former case is that between premises and conclusion ; in the latter, between Cause and Effect. The former is a law of thought, the latter is a law of things.

The fallacy here exposed is one of much interest, as it lies at the bottom of every scheme of Materialism—of every attempt to account for the phenomena of the universe without bringing in any other agency than that of mere Physical Laws, or what it was once the fashion to call “Second Causes.” Such a theory is not only insufficient, or not supported by the requisite evidence ; it is founded upon a mere confusion of thought, and is illogical and absurd. There is no such thing as the *agency* or *action* of a Law ; except as a figure of speech, we might as well predicate locomotion of an idea, or speak of bilateral triangles. “Second Causes” are no causes at all, and exist only in thought. A Cause, in the proper sense of the word, that is, an Efficient Cause, as original and direct in its action, must be a *First Cause* ; that through which its action is transmitted is not a Cause, but a portion of the Effect, since it does not act, but is only acted upon. At most, it is only the Instrumental Cause. It is only the helve of the hatchet, with which he who was the actual Cause of the murder really struck the fatal blow.

Among the dozen different meanings of the word “Cause” which have now been mentioned and distinguished from each other, it is perfectly obvious, I think, that only one, variously denominated the Efficient or the Transeunt Cause, fully expresses the idea, and deserves the name ; and that this idea, also, is the popular or vulgar notion, the ordinary significance of a very common word. Common people—men, women, and children—guided only by common-sense and the ordinary use of language, and not perverted by metaphysical or scientific theories, never attach any other meaning to the word, and find no difficulty in understanding it. The word, in this its distinctive meaning, exists in every language under the sun. Savages, as well as civilized men, speak as familiarly of the “Cause” of any event, as they do of the “Time” when it hap-

pens; though the significance which they attach to either of these words cannot have been derived from the senses, but must have originated from consciousness of what is constantly passing in their minds. Hence, the knowledge of Efficient Cause strictly so-called precedes speculative inquiry, and is anterior to all science and philosophy; for language is the expression and record of the primitive observation and unprejudiced common-sense of mankind. Common people everywhere understand a "Cause" to be that which, of itself, or self-determined, produces any change in the external world, and without which any such change would be impossible. "Of itself, or self-determined," I say; for they always mean that which we now usually term a First Cause; that is, not one which is itself an effect of a preceding cause, but one which is primal and self-determined in its action—not merely producing the event, but arbitrarily or freely determining the particular time and particular place of its occurrence. They mean just what you and I mean when we say, for instance, that Wilkes Booth was the First and only Cause of the death of President Lincoln. The bullet and the pistol were merely his instruments or Second Causes, and therefore incapable of self-determination for use in this particular act at this particular time and place. We hold that Booth was the First as well as the Efficient Cause of the assassination, because we regard him as exclusively responsible for it, as he certainly would not be if he had been an unconscious and involuntary implement in the hands of another; that is, if he had been an automaton, or merely a Physical Cause.

This popular idea of Causation strictly accords with its philosophical or metaphysical meaning.* It is what the physicist, even what the sceptic and the Positivist, have in mind when they assert, as they now do unanimously, that we can find no reality corresponding to it in the outward universe; that it is not, and cannot be, cognizable by the senses; and therefore that it is not a proper subject for physical investigation. Every change, every phenomenon which begins to exist at a definite time and place, must have an Efficient Cause; we can no more deny this proposition than we can doubt the existence and unbroken continuity of *pure* Space and Time, though neither can be witnessed by the senses. But the nicest observation, the

most refined analysis, nowhere discovers such a Cause in the external world. It can find there, at the utmost, nothing but invariable antecedence, a relation which differs from that of Cause and Effect as widely as the idea of person does from that of material substance. The result may be a humiliating one for the pride of human knowledge ; but there is no doubt of its correctness. While all admit that *a* Cause is necessary for any physical change whatsoever, *the* Cause of any one such change has never been found in the material universe.

Efficient Causation is conceivable only as an exertion of force, and therefore must be regarded as Transeunt ; that is, as operative on other things *ab extra*, and thereby producing change externally and beyond itself. And here is the chief reason why such causation is not only undiscoverable in the physical universe, but is even unthinkable as a property of any material substance. How can one body act on another, which is at a greater or less distance from it, without getting outside of itself ? Certainly the senses cannot perceive any power or force emanating from the one and passing to the other, so as to form a bridge between them ; and without such connection their mutual action and reaction are inconceivable. How can the sun act on the earth which is over ninety millions of miles off ? Or how can one particle of matter act on another particle without getting outside of itself, though the distance between them be made as small as possible ? For even if the two particles are brought in contact, the one is still outside of the other and distinct from it ; so that we still have the inexplicable phenomenon of *actio in distans*. This is the insoluble problem which is perpetually recurrent in metaphysics, besides influencing largely most of the theoretical physical science of our own day. When I throw a stone into the air, what is that which is communicated to it by virtue of which it continues to fly after it has left the hand, in spite of the retarding action of gravity which soon brings it again to rest ? Does the muscular force of my body extend for a considerable distance outside of that body, and thus sustain the stone in its flight ? Motion is certainly communicated to the stone ; but that is the effect produced, and not the cause. For what sustains the motion ?

Leibnitz seems to have had the clearest conviction of the

nature of this problem, and his mode of solving it is certainly an original one. He maintains that no one substance ever does act on another, but that each moves or rests independently, through the influence of its own immanent or inherent force, though it acts concurrently and in unison with every other Monad, in virtue of the harmony which was pre-established between them from the beginning. The successive development of its own inherent properties goes on as prearranged, in strict conformity with physical law, *as if* it was constantly acted upon by every other Monad; though it would continue to act in precisely the same manner, even if it were absolutely alone in the universe.

This analysis of the different meanings of the word has prepared the way for an exposition of the only intelligible and self-consistent theory of Causation strictly so-called. An Efficient Cause is a definite exertion of power or force, an effort, which is determinate not only in time and place, but in the direction or object to which it tends. Hence, just as much as Final Cause, it is always an act of mind, a primary and self-determining exertion of arbitrary Will, which can be immediately known only through consciousness. In truth, these two sorts of Cause always go together. There is no such thing as Will in general, apart from particular volitions. If I will at all, I must will something in particular—as to take this step towards the door, to lift this weight or push it aside, to read this book. In other words, the volition must always have a purpose or end in view—that is, a motive or Final Cause, *finis ad quem*. The fatalist surely will not object to this theory, for it is the foundation on which he erects his sole argument. And this purpose or Final Cause certainly cannot be directly known except through consciousness; for it is not a phenomenon of matter, but of mind. On the other hand, the purpose, the Final Cause, cannot be realized or made actual—cannot be carried out—except by a special exertion or effort, that is, by Efficient Causation. If the agnostic fatalist denies this assertion, he thereby denies that the motive determines the outward act, and so upsets his whole theory. In fact, it is of the very essence of mechanical fatalism to attribute efficient and necessary causation even to motives—that is, to mere states of con-

sciousness. Experience through the senses can make known only the *results* of Causation, only the motion or change produced, and from these dimly infer the nature of the agency whence they originate. All our knowledge here is *a posteriori*, or subsequent to experience. We learn only by trial that one substance is soluble in water, and another not—that iron expands and clay contracts under the application of heat. But in the case of mental exertion, the result to be accomplished is preconsidered, foreseen, and thereby made determinate and subservient to the particular end in view. Hence the result is known *a priori*, or before experience. The volition follows, which is a real effort, a conscious exertion of power, an immediate cognition of energy as such, or force in action; and this, if the power be sufficient, is necessarily succeeded by the effect. It must be always efficient, whether sufficient or not for the whole purpose which we intended to accomplish. Our real activity resides solely in the will; and will, as such, is always accompanied and guided by intellect, and usually (not always) witnessed by consciousness. Efficient and Final Causation always go together; both originate in mind and operate upon matter *ab extra*, as a foreign agency. Efficient Cause without Final Cause, because wholly indeterminate, is null and inconceivable; since it can effect nothing in particular, it cannot effect any thing whatsoever. Final Cause without Efficient Cause would be equally nugatory, as it would be a mere blank purpose, like an intention to travel to the moon, without any means of realization.

All physical phenomena, that is, all phenomena subject to observation by the senses, are reducible to modes of motion; they are nothing but changes of position among either the masses or the molecules of the substances in or through which they are manifested. Hence, as there must be room for such movement, they can only occur in space. Whether we call it heat, or light, or electricity, or galvanism, or chemical action, it is always the same thing; it is only a displacement, a vibration or stir, of particles. It is only by a misnomer or a metaphor that we speak of physical or chemical "forces," since the phenomena thus designated are only various forms and modes of motion, which it is convenient to distinguish from each other

by appropriate names, because each has its specific physical antecedents and attendant circumstances. Not "forces," but the "results" of force, are the objects of physical inquiry. Sensible perception is wholly incompetent to establish either the presence or the absence of causation or force strictly so-called. For the sense perceives immediately only the outward phenomenon—the physical change or movement; and from this the physical inquirer *infers*, what he does not and cannot immediately perceive, the presence of some unknown cause or force which produces that change. On the other hand, in the exercise of volition, the conscious mind directly and immediately perceives the force exerted, *i.e.*, the effort, and infers the physical change to be produced by it, even when no result follows, that is, when there is only a *tendency* to move, but no actual change of place. As already mentioned, the conscious volition looks to the future, and both foresees and determines what the physical result *shall be*; the physicist observes only the present result, and judges that a force *has been* exerted. The several physical "forces," so-called, are convertible and readily pass into each other, because they are only different kinds of motion; and it is self-evident that motion can produce or propagate nothing but motion. The moving body can operate only by a thrust or pull, and therefore can produce only a change of place in the body, or portion of a body, on which it impinges or to which it is fastened. Then it is not only incredible, but inconceivable, that it should generate thought, emotion, or will, neither of which can be expressed in terms of motion without evident absurdity. We might as well say that iron could construct a syllogism.

Comte and J. S. Mill, because they held the doctrine here maintained, that Efficient Causes are "radically inaccessible" to perception by the senses, were bound in logical consistency to propose, that the phraseology of physical science should be reformed by refraining altogether from the use of words which imply the existence of this sort of Causation; and Comte expressly admitted this obligation, and therefore, in the latter portion of his great work, "sedulously abstains" from mentioning the word "Cause." But Mr. Mill refuses to advocate such a change of language, though he admits that the scientific

phraseology is "altogether vicious," "inasmuch as the ascertainment of causes," so-called, is "merely the ascertainment of other and more universal laws of phenomena," that is, only the more accurate statement of the constant relations of succession or similarity between the objects and events which are the *results* of unknown causation. Mill continues to speak of physical "cause," because he does not "see what is gained by avoiding this particular word, when M. Comte is forced, like other people, to speak continually of *agents*, and their *action*, of *forces*," of *power*, "and the like,—terms equally liable to perversion, and which are partial and inadequate expressions for what no word that we possess, except 'Cause,' expresses in its full generality." This is well stated, though the argument leads to a conclusion the very opposite of that which is adopted by Mr. Mill. The whole phraseology of "causation," including even these derivative and cognate terms, of action, agency, force, power, and law, ought to be banished from the language of physical science. These words are misleading, because what is designated by them is imperceptible by the senses, and therefore is not an object of physical investigation. The accurate description of phenomena, together with the proper classification of objects and events, including the various kinds of motion and change, and the precise determination of the constant physical antecedents and consequents of these events, is the sole function of all that is now usually called "Science." If the physicists, chemists, and naturalists, especially those of them who have Positivist or agnostic aims and tendencies, would be logical and consistent, they would leave all thought and mention of cause, energy, power, force, and law to the metaphysician and the psychologist, that is, to the *moral* sciences.

Language inevitably reacts upon thought. Because the physicists have persisted in talking about causation, when, according to their own admission, they meant only invariable antecedence; and of force, power, and energy, when they meant only the motion—either actual or foreseen, either of masses or molecules—which is the result of force, they have been betrayed, in the expression of their doctrines, into statements which are inconsistent with each other, illogical, and even meaningless.

Observe, however, that we have here no controversy with them about the facts in the case, so far as these are physical facts—that is, so far as they are subject to observation by the senses and capable of being foreseen through the ordinary processes of inductive logic. These they have accurately observed, measured, classified, and predicted. But when they attempt to dovetail these facts into systems and theories, to build a philosophy of nature upon them, to give us a new cosmogony and a new conception of man, the universe, and God—or rather of man and the universe without a God—then they have gone beyond their proper functions, and their use of a phraseology which does not belong to them has betrayed them into countless inconsistencies and absurdities.

Take, for instance, their statements about gravity and about the conservation of force. They speak of gravity as if it were a force immanent in matter and necessarily belonging to it, like impenetrability, and then proceed to consider it as the efficient agent in the construction of the universe. But this is a wholly erroneous conception of the case; for any body, or any particle of matter, could it be completely isolated, that is, if it were alone in the universe, would not gravitate at all. Since what is true of any, is certainly true of all, it follows that the universe as a whole, with nothing outside of it, does not gravitate; and therefore gravity is not a quality inherent in matter, but must be regarded philosophically as the result of a metaphysical force situated *between* different bodies, not *in* them, and as acting upon them *ab extra*, from the outside. Physicists generally have ceased to speak of the “attraction” of gravitation, since that word implies that gravity is a pull; while nobody knows, or ever can know, whether it is a push or a pull. If your acquired habits compel you to think of gravity as a quantum of “force” necessarily inherent in a body and proportional to its mass, you must learn also to think of it as a *relative* force varying with different physical antecedents, that is, in proportion to the nearness or remoteness, and to the masses, of other bodies situated outside of it; and also as not acting at all—in other words, as non-existent—where there are no such outside bodies. A body at the surface of the earth, where it is about four thousand miles from the earth’s centre

of gravity, tends to move towards that centre with a certain momentum ; that is, if undermined, we can predict that it would fall with that momentum. But place the same body at eight thousand miles distance from the centre, and it will so tend to move with only one-fourth part of its former momentum. Then, on the doctrine of the conservation of force, what has become of three fourths of the gravitating "force" or "energy" originally inherent in that mass of matter? Nearly twenty years ago, Faraday asked that question, and so far as I know, it has never received any sufficient answer. Brute matter cannot act where it is not, for, as I have already explained, it cannot get outside of itself. Mr. J. J. Murphy has rightly called attention to the fact that gravity is incapable of saturation ; "that is to say, whatever be the quantity of matter that any mass of matter is attracting, it is capable of attracting any additional quantity with exactly the same force as if it had no other to attract." Thus, the sun acts upon any one planet with its whole "force ;" but it thus acts with its entire energy on every other planet, and would do so, even if the number of its planets were thrice as great. Phœbus is a skilful charioteer ; he drives with the same force and precision, whether four steeds, or four hundred, are yoked to his car.

Any one who has fully pondered these facts will surely accept the conclusion of Sir Isaac Newton when he says, "that gravity should be innate, inherent, and essential to matter, so that one body may act upon another at a distance through a vacuum, without the mediation of any thing else by and through which their action and force may be conveyed from one to another, is to me so great an absurdity, that I believe no man who has in philosophical matters a competent faculty of thinking can ever fall into it. *Gravity must be caused by an agent acting constantly according to certain laws.*" In other words, gravity is not a "potency" of matter at all, but is produced by Mind acting uniformly with a definite purpose. To the mere physicist, it is only one kind of motion, which may be expected to recur, and to vary, with certain physical antecedents or under certain attendant circumstances ; that is, in a fixed proportion to the nearness and the masses of other bodies. *The motion alone is measurable, depending on the relations of*

space and time ; and therefore it alone is calculable ; *the cause of it*, or the force which urges the moving body along its appointed path, *cannot be measured*, for it cannot even be perceived by sense. Hence the materialist and the merely physical cosmogonist can make no use of it in their vain attempts to explain the secret of the universe.

The principle of physical science which was first styled the conservation of force is now more definitely called the conservation of energy ; and we are told that energy should be defined as "force in action." The change of phraseology was necessary, for as the mere physicist has no conception of "force" except as that which produces motion, there was an evident absurdity in speaking of any force which is *not* in action—that is, of a force which does not produce motion. The doctrine that the energy is measured by "the work done" expresses the same meaning in other words ; for the work done is the amount of motion produced, and motion cannot be produced except by "force in action." And the new statement of the principle is not a whit more defensible than the old one, since it obliges us to speak of "potential energy." But the potential, so long as it is only potential, is unreal ; and therefore merely potential energy is no energy at all. A bit of pure carbon still uncrystallized is a potential diamond ; but no one will maintain that it is a real diamond. Then there is no "conservation" of the *same* energy ; for when the actual becomes merely potential, the energy or "force in action" becomes non-existent, is for the time destroyed. Then we rightly affirm, not the conservation, but the possibility of creating anew, by a change of circumstances, an amount of energy equivalent to that which has been destroyed. For the conversion of the potential into the actual is a distinct act of creation, since the change of circumstances, by which alone it can be brought about, is a separate event which can be produced only by a cause of its own. The potential does not change itself into the actual, but needs to be acted upon anew before the change will take place. Thus, the potential energy of the mill-pond cannot be converted into the actual energy which turns the wheels, except by a fresh application of force in raising the gates of the sluice. In every way, then, this statement

of the principle in physical science is unsatisfactory, and even meaningless. It speaks of the conservation of something which is not conserved, but destroyed; and after defining energy to be force in action, it speaks of potential energy—that is, of force in action which is not in action.

So much for the blunders into which the physicists with agnostic aims and tendencies have been betrayed through not properly distinguishing Physical Cause, which is the mere antecedent of motion, from Efficient Cause, which, operating *ab extra*, and so not immanent in matter, really creates the motion. Get rid of this confusion of ideas, and the unquestionable facts in the case may be stated in terms to which no exception can be taken. Do not talk about the conservation of force, but about the convertibility of motion. The principle is, that equal quantities of the two sorts of motion, molar and molecular, admit of being converted into each other. Also, after a given amount of motion has ceased, and after a shorter or longer interval has ensued, an equivalent amount of it may be reproduced through a change of circumstances, which is often brought about by a comparatively slight exertion of force. The precise limits of the convertibility into each other of the different kinds of molecular motion, such as heat, light, electricity, and chemical affinity, still remain to be determined; but there can be little doubt, I think, that science will ultimately establish their mutual convertibility to the full extent.

The scientific world ought to be now prepared to accept the doctrine of Descartes, that matter has no inherent dynamical properties whatsoever, but only a passive capacity of *resistance*; as manifested, first, by inertia, whereby it resists a change of state from rest to motion; secondly, by impenetrability, whereby it resists being extruded from the occupancy of space, and thus becomes capable of being acted upon and of transmitting such action on to other matter; and thirdly, of cohesion and hardness, whereby it resists the disintegrating action of a saw or a hammer. Neither of these forms of passive resistance admits of being converted into active energy or force, since neither of them can *originate* motion.

We have next to inquire whether dynamic energy, though not to be found in the inorganic world, that is, in the constit-

uent particles of matter as such, may not be first developed in the various structures and machines which are artistically built up from those particles ; that is to say, may it not first appear in the organic world? Of course, these living organisms act spontaneously ; but such action we attribute to a proper efficient cause—that is, to a definite will and intellect operating upon the structure *ab extra*, and therefore never manifested except when there is life within the organism. This is only making the distinction, with which we are all familiar, between a machine of man's device and the motive-power by which it is driven. No machine can be invented which will run of itself ; some extraneous force, that of steam, or air, or the muscular strength of men or horses, must be introduced into it and periodically renewed, or the action will stop. If the watch be not wound up, it will not go. But while every machine constructed by man certainly has this great defect, the question with which we are now concerned is, whether one of nature's machines, a living organism, may not be so curiously constructed that it will run of itself, mechanically, without the aid of any distinct principle of mind or life. In other words, are all living organisms, from the animalcule up to man, mere automata? Can we solve the problem of perpetual motion, or has "nature" solved it? With the mere particles of brute matter, which, as we have now shown, have no immanent active powers whatsoever, but only a passive capacity of resistance, can we build up a structure—or rather, can a structure build itself up—which will, so to speak, run itself, and manifest all the ordinary phenomena of life and mind?

The human body, if regarded simply as a mechanical structure, is not merely one machine seemingly put together with a single purpose, but an organism composed of many machines, each having a purpose of its own, but all being co-ordinated and co-operating for a common and higher end. Thus, speaking roughly, the eye is an opera-glass ; the mouth with its appendages is a mill for cutting, grinding, and masticating food ; the stomach is a chemical laboratory ; the vocal organs form a flute or clarionet ; the heart is a pump ; the circulatory canals are a set of hydraulic works, etc. All these "natural machines" are of recent construction, corresponding with the age of

the particular animal in whose body they are now put together, most of them being already perfected, or far advanced towards perfection, even before birth, though the functions of many of them come into activity only after the embryonic period. Thus, they are not only skilfully arranged, but *prearranged* for future use. Children have lungs before they breathe, eyes before they see, ears before they hear, and rudimentary teeth before they need to masticate.

How came these organs to be so constructed? By whom, or by what, were they thus put together and curiously built up?

"I don't know," says the Agnostic; "and because I am not sure what the operating agency is, I will assume that there is none, and will merely describe the successive steps of the process by which they are gradually perfected." According to the Animists, Stahl, Hartmann, and their disciples, the animal's own soul built them up unconsciously. "Through inherited aptitudes," say the Darwinites, "the elementary particles having contracted the habit of thus assembling themselves together, when they were once the constituent atoms of this animal's ancestors:"—pretty much as some people continue to go to church after they have ceased to care much about the services. "The vital force—the *nisus formativus* or *bildungstrieb*—constructed them," say the Vitalists. "The inherent physical energies of material atoms," says the Materialist. "Nature," says the Pantheist. "God," says the Theist.

Thus much, at least, may be affirmed with certainty; that the power or agency, whatever it was, which first constructed them, must have been anterior in time and action to the organ so constructed, and therefore cannot have been inherent in the organ itself. The cause must precede the effect; the builder must antedate the building; since nothing can act before it exists. If the structure is formed on a definite plan, if there is an evident arrangement of the parts with a view to the future exigencies of the animal's life, those exigencies must have been foreseen, and the plan prearranged, before the organism itself came into being. Hence, the creative or fashioning agency must be sought for *outside* of the organism; even if *now* embodied in it, as is supposed to be the case with the hypothetical vital force, it must have existed before that embodiment took

place. Though the soul has clothed itself with a corporeal integument, it must have been naked before that garment was woven, and even while it was a-weaving. If you tell me that the machine, when once constructed, will run of itself, without the help of any foreign motive-power, your doctrine, whether credible or not, is at least intelligible. But when you say that the organ, as a whole, constructed itself out of materials previously structureless, the proposition is meaningless and self-contradictory.

The argument here is by no means restricted to the genetic process, which appears as the birth and development of the organism. It extends also to the processes of nutrition ; that is, to the means which are constantly provided for the maintenance of the organism in being. Directly or indirectly, nutrition is carried on through the conversion of the inorganic into the organic ; through the plastic formation, out of chemically simple elements, first of organic compounds, and then of living tissues. Here again, continuously, throughout the whole life, the weaver must precede the web. Whichever way we turn, the life appears as a true cause *secundum esse*, as that which incessantly generates and upholds the organization ; while the organism, being the product, cannot be that which upholds the life. Even protoplasm, considered simply as protoplasm, without any adjunct, is as dead as Julius Cæsar. It needs the presence and co-operation of pre-existing life, before it can be warmed into animate being. Uproot the plant, or knock the animal on the head, and the protoplasmic constituents of the sap or the blood, though retaining all their characteristic mechanical and chemical properties, will no longer be fashioned into living tissues, but will generate only corruption and death.

The phenomena in question are not made one whit more explicable by referring to the frequency and the regularity of their occurrence. What is called "the reign of law" diminishes our wonder, it is true, as we are no longer startled by an unexpected occurrence. The event is regarded with more apathy, when it recurs every day and every hour ; but it is not thereby made less mysterious. An efficient cause must be found for the frequent repetition of an act, just as much as for its first appearance. A single step in the series is not accounted for by referring it to the preceding step, however familiar the se-

quence may have become, when the only perceivable connection between the two is mere antecedence and consequence. But many people seem to imagine that, if the successive steps are very short ones, or placed very near each other, a bridge is thereby formed, on which we may pass without difficulty from one extreme to the other, either from the structureless germ up to the complex and perfect organism, or from the animalcule up to man. The whole theory of the evolutionists is founded upon this illusion. But the real difficulty consists in taking any step at all, however short. *Ce n'est que le premier pas qui coûte*. If one has no power of locomotion, he cannot budge the fraction of an inch beyond the starting-point. Even if the Law of Continuity, first announced by Leibnitz, were verified by observation through its whole extent; even if a chain of being were established, without break or leap, from the lowest Monad up to the intellect of an archangel, the successive steps sliding into each other by imperceptible gradations, we should not thereby diminish one whit the necessity of seeking, outside of the series, for a First Cause of all things. Without the agency of Mind, which cannot be found in a chain of mere physical events or self-acting machines, however near they may lie to each other, the first step of evolution, the least movement or change, becomes impossible.

Certain modes of motion and capacities of resistance, improperly called physical or chemical "forces," are invariably connected with definite mechanical antecedents. Here we are in the inorganic kingdom, in the realm of mechanical necessity, where "the reign of law" seems to be absolute. But it should not be supposed that "the law" accounts for the phenomenon, or explains how it is brought about; the law is a mere statement of the fact that, so far as observation has extended, certain events recur only in a fixed order. Even when vital or psychical forces are carried over, as they frequently are, into this domain, they operate not by extinguishing, or even suspending, the mechanical properties which are there at home, but simply by overriding their opposition, a proportionally larger expenditure, a greater *effort*, of the psychical force being needed in order to overcome this resistance, and the result produced being therefore properly compound, because determined by the joint agency of the force and the resistance acting together.

What we term a miracle, therefore, does not violate, or even suspend, any of the so-called Laws of Nature ; any more than a chemist does when, by applying heat or galvanism, he overpowers the chemical affinity which binds together the two elements of a neutral salt ; any more than a man does when, by a strong effort of will, he bursts his chains or lifts a heavy weight. In either case, there is a joint operation of two factors : the one, the physical resistance, being determined by its mechanical antecedents ; and the other, the psychical force, being guided by its purpose or Final Cause. The essence of the miracle consists in *the purpose wherein it originates*, and not at all in the nature of the force employed, nor in the outward physical result, which is just as much produced by the interaction of force and resistance as is the stroke of the piston of a steam-engine. When the materialist denies either the possibility or the credibility of psychical force, guided by a definite purpose, thus intervening and changing the ordinary sequence of physical events, he forgets the unquestionable action of his own will in the formation of the spoken or written words which express his denial. Now, if there be in nature distinct and manifest indications of the existence and activity of a Mind and purpose other and higher than the mind and purposes of man—and for this argument, it matters not at all *how much* higher, that is, whether they be merely angelic or divine—then the occurrence of a miracle is just as credible as the story of a St. Francis of Assisi, a San Carlo Borromeo, a Pascal, or an Oberlin. For the life and character of either of these men are as exceptional—I am not afraid to add, as miraculous—as many events recorded in Scripture, which every Christian believes to be miraculous, because he recognizes in them a definite purpose to promote the moral and spiritual well-being of mankind.

According to the conclusion at which we have now arrived, matter has only a capacity of resisting a change of state ; Efficient Cause and Final Cause, by which alone that resistance can be overcome, and which must operate in combination with each other, can be found only in the action of mind. With this view of the philosophy of Causation, let us go back to consider further the several theories that have been propounded to explain the origin of the various organs in the human body. Among these, the doctrine of the Agnostics may at once be

put aside, because it abandons the problem as insoluble ; though the open admission of inability to find the true cause is here coupled with an unfounded implied assertion, that it is unnecessary to seek for it, as no such cause exists. The vague abstraction of " Nature " or " Substance," as the occult cause of all phenomena, which is the pantheistic theory, really coincides with the doctrine of the materialists, that the building of the organism is due to the native forces immanent in the senseless particles out of which it is constructed. Both of these forms of the doctrine have been sufficiently confuted in the foregoing part of this discussion. The only other theory which is essentially materialistic in character is that of " Pangenesis," propounded avowedly as a provisional hypothesis by Mr. Charles Darwin, and in a modified form adopted also by Mr. Herbert Spencer. It is open to all the objections which lie against materialism proper, besides having some formidable difficulties of its own. The " gemmules," through which alone the inherited aptitudes are transmitted, form only an infinitesimal portion of the body of the offspring ; they are contained in the egg or germ, which is all that is directly handed down from parent to child. The process through which the germ is subsequently developed into the full-grown organism takes place through the gradual accretion, upon the basis of these gemmules, of foreign particles and chemical elements coming from the world outside, which have had no opportunity of being modified by ancestral peculiarities, since they never formed a part of the body of the parent. At most, therefore, the gemmules are only the foremen of the works ; they are not the bricks and mortar out of which the edifice is constructed, but only the workmen which determine how these crude materials shall be put together. Being themselves only particles of matter, their co-ordinating action upon other particles still presents the insurmountable difficulty of conceiving inert senseless atoms to be endowed with active powers and definite architectural propensities, and to be capable of acting outside of themselves upon other atoms. Whether these powers and propensities were native and immanent in the atoms from the outset, or were superinduced upon them by hereditary descent, makes no difference ; for it is inconceivable that they should be lodged there at all.

The three remaining theories easily coalesce into one, which affords the only intelligible explanation of the phenomenon, since it is thereby resolved into the action of Mind, thus admitting the necessary co-operation of Final with Efficient Causation. The evolution of the fully-formed organism from the nearly structureless germ takes place by epigenesis; that is, by a generative process which consists in the exertion of the necessary quantum of force in a determinate manner, or with definite aims and tendencies, so as to construct these particular tissues, and build up these particular organs, rather than any other. The force is not applied at random; if it were, it would be wasted; but it is controlled and guided throughout by what the Germans call the *Gattungsidee*, the idea of the typical form of the species to which the germ belongs. This generative force, acting in accordance with its determinative and guiding principle, is expressed by one school of physiologists as "the vital force," the *nisus formativus* of Blumenbach. Here the Vitalists merely give a name to the constructive process, without attempting to carry the explanation of it any farther.

But the doctrine of the Animists, first propounded by Stahl near the close of the seventeenth century, and now maintained by Bouillier, Hartmann, and a large school of their disciples, supplies this deficiency, and first affords an intelligible theory of the process through which the organism is originally built up and afterwards maintained in being. Briefly described, this doctrine is, that the unconscious instinctive action of the animal's own will and intellect—the thinking self, in the case of the human being—is the plastic or formative cause, the architect of the material structure in which that animal soul has its shelter and its home. This theory harmonizes perfectly with the theist's conception of the process, since it attributes, as Leibnitz does, the primary endowment of each soul with its special instincts to the infinite wisdom of the Author and Governor of all things. May not the unconscious Will in man and animals be the agent of Deity in carrying out the divine plan in creation—an agent which is still finite and limited in its sphere and modes of operation, and thus sometimes leaving faults and imperfection in its work; but which is still divinely inspired, and therefore capable of producing results immeasurably supe-

rior to the best work of the uninspired conscious intellect? "For aught I know," says Coleridge, "the thinking spirit within me may be *substantially* one with the principle of life and of vital operation. For aught I know, it may be employed as a secondary agent in the marvellous organization and organic movements of my body."¹

This is an exact description of Instinct—that faculty so marvellous and inscrutable in its modes of work, and in what it accomplishes, that it compelled even the cold and sceptical Kant to cry out, "Instinct is the voice of God."

Many of the acknowledged results of instinct so closely resemble the work here supposed to be done by it unconsciously, that one is almost compelled to believe the same agency to be employed in both cases. The preservation of the animal's life, the choice and collection of its appropriate food, the continuance of its species, the care of its young, the building of its home, the fit period for its annual migration and the proper direction of its flight, all are tasks performed by its own voluntary efforts, under the guidance indeed of a wisdom immeasurably higher than its own, but through the conscious use of its own organs and muscular powers, which are brought into play by a vague impulse, a blind craving, urging it to attain some useful end of which the creature itself knows nothing. Is it unreasonable, then, to suppose those muscles and other organs are first constructed by the same kind of heaven-directed agency by which they are certainly fed and kept in repair? As Hartmann remarks, the *Gattungsidae* of each species of bird includes the special fashion of its nest and the notes of its peculiar song just as much as the fashion of its plumage, the structure of its skeleton, and the characteristics of its beak and claws. In either case, an idea is to be realized, a purpose is to be carried into execution, and this is the proper function of will and intellect combined. The nest and the song are certainly the bird's own instinctive acts; why not also the fashioning of the organs through which these acts are performed, since these are parts of the same whole, a concatenation of means to one and the same end? It has already been shown that the plastic energy which builds up the organism cannot reside in its own work, since the

¹ "Biographia Literaria," New York ed., 1847, p. 569.

architect must act before the house can be begun. It is also evident that the soul, though present to the body and intimately connected with it, as the immediate sphere of its activity, cannot strictly be said to be *in* the very substance out of which that organism is constructed, but rather, like every other efficient cause, must operate on it *ab extra*. The directing energy must be outside and virtually independent of the work directed or the thing accomplished.

The unconscious action of the emotions, the thoughts, and other states of mind, upon the corporeal functions, either impeding or quickening and intensifying their normal work, and sometimes even bringing the muscles into play in order to ward off danger or to express involuntary sympathy, is matter of the commonest observation. Shame calls up blushes, grief makes the eyes overflow, angry determination knits the brow and sets the teeth, fear blanches the cheek and paralyzes the limbs.

Mihi frigidus horror

Membra quatit, gelidusque coit formidine sanguis.

Obstupui, steteruntque comæ, et vox faucibus hæsit.

These physical consequences of our mental states, so far from being produced intentionally, generally take place in spite of our utmost efforts to prevent them. The involuntary protective action of the limbs and other organs is quicker and surer than our conscious efforts guided by reflection. Before we have time to think, the deadly thrust is parried, the eyelids close against powder flashed in the face, and a sudden spring saves us from a dangerous fall. Involuntary sympathy sends a yawn all round the circle, repeats the cries and gestures of the intenser passions, and makes the spectators of a rope-dancer writhe and twist their bodies as if they too were in imminent peril. Imagination artfully incited is a more potent bane or antidote than can be found in the whole *materia medica*. One who falsely believes that he has swallowed an active drug often suffers all its real consequences. Thinking and reading about a fancied malady often prostrates the patient with its actual symptoms. Even the death-stroke is sometimes so far anticipated that the sentenced criminal dies before it has fallen. The *stigmata* of St. Francis, and the periodic bleeding afresh of wounds on the hands, feet, and brow of Louise Lateau and other fanatics, do

not need to be accounted for by any cause more mysterious than the ill-regulated fervor of their own religious emotions. What is called the co-ordinating action of the spinal cord and the sympathetic ganglia over the vital functions of the body cannot be rationally conceived except as the unconscious action of mind regulating and keeping in play the curious mechanism which it originally fashioned and put together.

Inherited resemblances and aptitudes become intelligible only when they are conceived as the results of spiritual endowments, and as transmitted in the mind and character which the child certainly receives by direct descent from the parents. I can understand how certain modes of thought should have become habitual to the intellect, and certain modes of action to the will; for we know from experience that either of these faculties, though capable almost of an infinite variety in its modes of operation, may yet easily fall into the ruts of custom and repeat the same theme even to weariness. But I cannot understand how the mere particles of brute matter should contract any habit whatsoever except of being systematically quiescent and changeless when not acted upon by a foreign force, or of continuing indefinitely the simple rectilinear or vibratory motion which has once been impressed upon them. The Darwinian gemmules, inconceivably minute in size, are nearly akin to the Leibnitzian Monads; and, like these, must be supposed to be units of spiritual being, which furnish the only rational theory and explanation of those phenomena of hereditary transmission and efficient and final causation which are manifested in the organic kingdom.

Because Efficient Causation is conceivable only as an exertion of force, I have argued that it must be regarded as Transcendent and transcendent; that is, as operative on other things *ab extra*, and thereby as producing change externally and beyond itself. Hence it cannot be attributed to mere brute Matter, which must be conceived as occupying space, and therefore as limited by the space so occupied. But does such transcendent action become any more intelligible when it is regarded as the action of Mind? In one respect it certainly does; for it harmonizes with whatever else we know respecting the nature and peculiar functions of Mind. Knowledge is one of these functions, and the sphere of knowledge is certainly not limited

to what takes place within the thinking Ego, but extends to what lies far outside of it both in time and space. We know both the past and the distant, and we anticipate even the future. Consequently, as the mind certainly in one sense extends its sphere of operation out of itself, and even goes beyond the limits of the body, in order *to know*, we may well believe that it exercises an equally transcendent power in order *to act*. As I have already argued in a previous article in this REVIEW, the thinking Self (which is the proper designation of what is usually called "mind"), since it is absolutely one and indivisible, does not occupy space, and yet is undeniably present to the whole nervous organism which it animates. All that is inside of the skin is also inside of consciousness. I feel not only at my finger-tips, but over the whole surface of my body. Instantly, and without the slightest doubt, I localize a pain as in the head, the knee, or the back, and put my finger at once upon the spot where a mosquito has stung me. Without the least difficulty or effort, the will bends any joint and contracts any muscle that is usually subject to its conscious action. Granted that we cannot conceive *how* the Ego exercises this marvellous power; still the fact is unquestionable that it *does* exercise it; it is omnipresent to the whole body.

It is also easy to show that the thinking Self is not any more subject to the limitations of Time, than to those of Space. Analyze even the simplest act of memory, and you will find that, not merely a mental image or picture of what has been, but the Past itself, must be actually *present* to consciousness. What enables me to decide without hesitation that the portrait now before me presents either an accurate or an unfaithful copy of the features of my friend who died ten years ago? An act of comparison is necessary here; the painter's work can be judged only by a reference to the living face of which it professes to be a copy. Then that living face must even now be present to my consciousness; otherwise I should have no standard whereby to estimate the artist's work. But you will doubtless say that this standard is only a mental image, only another picture called up by the imagination, and attested by the memory to be a faithful likeness. Consider for a moment, however, and you will find that this answer leaves the matter short, as it merely pushes the difficulty one step further back. For the

question immediately recurs, What convinces me that the picture thus presented by my imagination is a more faithful portrait than the one on canvas? Of course, memory says that this one is the true image, and the other is only a counterfeit. But how *could* memory say so, except through comparing both pictures, the one seen by the outward sense and the other visible only to the mind's eye, with the original of which they both profess to be a copy? Turn the matter as we may, then, the Past must be veritably present to consciousness, or we could know nothing about it except by vague conjecture. Memory does not conjecture, but affirms with absolute conviction, even repeating its testimony on oath when a question of life or death is pending. As I have elsewhere urged, we could not be sure of our personal identity, if our past Self and our present Self were not both present to consciousness, so as to be compared with each other and recognized as identical.

Hence I feel constrained to adopt the conclusion, which is accepted also by Dean Mansel and Schopenhauer, that the conscious Self is independent both of Time and Space. Its acts and manifestations, indeed, as presented either to the external senses or to consciousness, are necessarily subject to these two forms and conditions of all phenomenal being. My volition can appear in outward act only through movements which require Space; and my thoughts are subject to the law of Time, since they can be presented only in succession to my consciousness. But the conscious Subject of these mental states belongs to the realm of ontology, or pure being; it is a noumenon, and as such it transcends the laws and conditions of all phenomena. It is finite indeed, and therefore limited and dependent; it can act, remember, and think only within the restricted sphere marked out for it by an allwise Providence. But though his finite nature exposes him to error and sin, Man is still made in the image of God; he is free, responsible, and immortal, while neither of these three attributes belongs to any other form of created being. And he is also made after the likeness of his Creator, in that the unity and indivisibility of his inmost being emancipate him from the laws of Space, while his responsibility and undying nature are equally free from the limitations of Time.

FRANCIS BOWEN.

A PLEA FOR FREE-TRADE.

I HAVE no interest whatever, direct or indirect, in any trade. I am a free-trader by conviction—a sincere follower of Richard Cobden in the belief that unrestricted trade is the bond of peace and of righteousness in foreign politics, and that it is as wholesome and necessary for the due and proper development of nations and continents as it is for the ordinary relations of citizen and citizen in every community. I have shown in a preceding article that the progress and prosperity of England are cramped and compressed to injury by an unnatural land system.¹ It is my present purpose to demonstrate that the progress and prosperity of the United States are even more injuriously affected by the policy of protection, and that we derive absolute and unquestionable advantage from the institution of free-trade, even though that unrestricted import on this side is not met on the other side of the ocean by reciprocity.

The character of the struggle for free imports into the United Kingdom has a bearing by no means insignificant upon the right comprehension of this great matter. It began with a demand which the least enlightened could understand—a demand for cheap bread. The cry was simple, unmistakable, and finally it was enforced by the entry of famine into Ireland. On February 16th, 1842, Cobden addressed the government in the House of Commons in these words: “I supplicate on the part of the starving people that they, and not you, shall be the judges of their need of corn; that they, and not you, shall say when it is wanted. You, who never knew the want of a meal

¹ “The Cost of a Landed Gentry.” Arthur Arnold. PRINCETON REVIEW, September, 1878.

in your lives, do you presume to know when the people want bread? The right honorable baronet [Sir Robert Peel, then Prime Minister] is the cause of our present position, and upon his shoulders will the people lay the whole of the responsibility." Then, turning from the Treasury Bench to the general body of the House, he added: "Are you prepared to carry out even-handed justice to the people? If not, your law will not stand—nay, your House itself, if based upon injustice, will not stand!" The landed gentry, supported by their tenants, the farmers, were prepared to maintain the heavy tax upon bread if they could do so with safety. Time after time they buttressed their interests with extraordinary evidence. Farmers were brought before committees of the House of Commons, who averred that unless they obtained eighty or ninety shillings per quarter—that is, about double the present price—for wheat, the corn lands of England must pass out of cultivation and be abandoned to weeds and waste. No protective duty could possibly be more difficult to maintain; no position could be more invidious, more hostile to the interests of the rapidly increasing population engaged in manufactures; yet the landed gentry of the United Kingdom made a bold and resolute fight. If any one is silly enough to suppose that any protective duty, any restriction upon the entry of foreign produce, will be lightly surrendered by those who are interested in the production at home of the commodity so dealt with, let him consider the conduct of this body of gentlemen, who, though they may not be as a rule highly educated or intelligent, are certainly as honorable a body of men, according to their lights, as any in the world. They are men undoubtedly capable of making immense personal sacrifices for the welfare of their country, who would melt their family plate, mortgage their broad acres, and shed their blood with hearty willingness in fighting an invader of their country, but whose sense of public rights and popular claims, of the commercial as well as the social advantages of freedom, are not merely undeveloped, but have been, in the minds of most of them, supplanted by hereditary training in the ideas of feudalism. With what simplicity they called on Parliament, which never, except in the revolutionary times of Cromwell and of the Prince of Orange, had been other than

subservient to their own interpretation of their interests, to regard their family affairs as of more consequence than the head of the people! Sir Edward Knatchbull, baronet and knight of the shire of Kent, declared that the landed gentry must uphold the Corn Law, because if it were repealed how would it be possible for them to provide jointures for the ladies of their families, charged upon their estates; and Lord Mountcashel (of whom Cobden said in Parliament, "He's not over sharp") declared that the nobility had usually mortgages upon their estates, and that it would be impossible to pay interest if there was no tax on bread. I fear there are some defenders of the evils of protection who are not quite so simple-minded and so transparently honest in their arguments as these nobles and squires of the old country.

That land system which I recently described in this Review, which imposes so heavy a burden upon my countrymen, was approached on its weakest side by the advocates of free-trade in corn. If instead of being held by a handful of people the soil of these islands had been, as is the soil of the United States or of France, the property of millions of the people, I will not dare to assert that free import of corn could have been carried without successful revolution, if not civil war. Not a few of the best years of Lord Beaconsfield's life were devoted to skilful resistance of the advances of the party represented by the Anti-Corn Law League. Suppose that instead of appealing to the personal interests of a few thousands of landed gentlemen, for the most part of quiet, inarticulate disposition, he had been able to call upon five million freeholders, as did Louis Napoleon—who shall venture to predict that Cobden's victory would have been so quickly, or even peacefully gained? The one signal service that our contracted, feudalistic land system has indirectly rendered to the people need not be forgotten or overlooked. There is not another country in the world in which the proprietors of land are not numerically stronger than any other single interest. I intend presently to assert that this superiority in number of those having a proprietary interest in agriculture exists in the United States, and I shall appeal to the farming proprietors of America to look to their own advantage, and to be up and doing in the

demand for free-trade. In England landlords had been accustomed from the foundation of Parliament to regard their supremacy as an unquestioned and unquestionable fact. They ignored the increase of population as unimportant, and held their own ascendancy as chief of the institutions of the country. In 1832 they had been constrained by tumult to accept Lord Grey's Reform Bill, which admitted a fraction of the middle-class to the suffrage ; but voting was not secret, as it now is, and to nearly every first-class estate there was attached a parliamentary borough, returning nominees of the great landowner, as his representatives, on behalf of the people. The acceptance which Cobden's arguments met with throughout the country, among their own tenants as well as with the population of towns, inflicted upon British landlords a rude surprise. Rents had been rising at the time when Mr. Bright declared at a public meeting in Drury Lane Theatre that the crops had failed for five years, and that though the people had power to send abroad their manufactures, their coal and iron, to buy food, "they were not allowed to use it by this accursed law, which, far from relieving the wants of the people, had, day after day, destroyed them, and caused them to suffer, to starve, and to die." Mr. Bright continued : "It is said of the celebrated writer, Mr. Dickens, that he has described low life so well that he must have lived in a workhouse. The reply is, that he has lived in England, which is one great workhouse. The country is filled with paupers. We are now devouring each other." Cobden turned the farmers against their landlords by showing "that the farmers have suffered more than any other class of the community from the operation of this law, or if there be any exception, it is the agricultural laborers who suffer more than any other class from these Corn and Provision Laws." To the farmers he said : "As the son of a farmer myself, I ask you, have you since the year 1815 done as well, made as much money, and realized as much profit, on a given amount of capital, as the retail trader, the grocer, the linen-draper, the tailor, in the nearest market town?" He put that question in many forms and in many places, and the farmers always replied that they had not done well under protection. So it happened

that the great agricultural landowners in England—a number very considerably under ten thousand—stood alone.

To the telling shots of Cobden was added the hot fire of Bright's continuous speech, and the thunder of O'Connell's unsparing eloquence was heard on the side of the people. "The sentiment of England," roared the gifted Irishman, "is awakened and abroad; it never will sleep again until the poor are righted and the rich compelled to be honest." But it was, as Sir Robert Peel in his autobiography confessed, the appearance of famine, the menace of convulsion in Ireland, which dictated his own conversion as an inevitable necessity, and which led the House of Lords to sustain him in his free-trade policy. Thus the struggle ended, and Peel, by whom free-trade in corn was conceded, said of himself:

"I shall leave a name execrated by every monopolist, who from less honorable motives clamors for protection because it conduces to his own individual benefit; but it may be that I shall also leave a name, sometimes remembered with expressions of good-will, in the abode of those whose lot it is to labor, and to earn their daily bread by the sweat of their brow, when they shall recruit their exhausted strength with abundant and untaxed food, the sweeter because it is no longer leavened by a sense of injustice."

I will only address one note of commentary to this brief history; but it is a note of the weightiest importance, and is pregnant with warning for all the blind opponents of free-trade. The iron shipbuilders on the Delaware, the cotton manufacturers of Lowell, the iron and steel rail-makers of the United States, cannot be so sure that protection is indispensable for their respective trades as were the landed aristocracy of the United Kingdom that it was the mainstay, the needful support, of their fortunes as proprietors. I have not the slightest doubt of their sincerity in regard to what they considered their personal interests. They were beaten; as they believed, to their own great disadvantage. At the final meeting of the Anti-Corn Law League on July 2d, 1846, Mr. Bright said: "Until now this country has been ruled by the class of great proprietors of the soil. Every one must have foreseen that as trade and manufactures extended the balance of power would at some time or other be thrown into another scale. Well, that time has come, and the rising of this League seven years ago was sufficient to

have pointed out to any statesman that the power of the landed aristocracy had reached its height, and that henceforth it would find a rival to which eventually it must become subjected." They were subjected; they thought themselves ruined by the admission of the free import of corn. But now, thirty years afterwards, the first agricultural statist in the United Kingdom—Mr. Caird, to whom the landed aristocracy defer as the best authority—has reported that during the last twenty years, which embrace the active period of the free-trade policy, "the land-rent of this country, when capitalized at thirty years' purchase, shows an increased value of three hundred and thirty-one millions sterling." Here are his figures :¹

GROSS ANNUAL VALUE OF LAND ASSESSED TO THE INCOME-TAX IN 1857 AND 1875.

	1857.	1875.	Increase.	Increase percent.	Capital Value of Income at 30 years' purchase.
England	£41,177,000	£50,125,000	£8,948,000	21	£268,440,000
Scotland	5,932,000	7,493,000	1,561,000	26	46,830,000
Ireland.....	8,747,000	9,293,000	546,000	6	16,380,000
	£55,856,000	£66,911,000	£11,055,000	..	£331,650,000

This enormous increase is, be it remembered, in the value, not of urban, but of agricultural land. This sum, more than sufficient to discharge four-fifths of the public debt of the United States, has been added in a space of time no longer than that for which the policy of protection has ruled the government of those States, to the wealth of those who declared that they were to become the impoverished victims of free-trade. Who can wonder that when we had established in the United Kingdom the primary blessing of a free import of corn, by which a steadiness of price and a certainty of supply never before observed in this country were permanently obtained, our people insisted upon placing power in the hands of those who would carry on Cobden's policy through the tedious details of the then existing tariff. Fortunately there was at hand in the person of Mr. Gladstone the most competent financier the English-speaking race has yet produced. Mr. Gladstone cleared

¹ "The Landed Interest." By James Caird, C.B., F.R.S.

our tariff of numberless import duties, and has educated a school of statesmen who, because they understand, are faithful to the principles of free-trade.

There is now heard in England an ignorant cry against what is called "one-sided" free-trade. It seems to be supposed that this—the richest country on the globe—has made "open house" to all the world, and has been content to accept in return nothing but a niggardly invitation to take a glass of light wine from France. Perhaps the devotion of Cobden himself to negotiating the commercial treaty with France, which was in fact an act of contention for reciprocity, is in some degree responsible for the prevalent heresy which takes the form of doubt that free-trade is an absolute benefit. I admit that this benefit may be said to be less open to question in England than in the newer community of the United States. But I will not admit that a system of hostile tariffs would not be more rational between certain States of that Union than between the entire territory and the United Kingdom. I can remember when Cobden's doctrine that we should buy in the cheapest and sell in the dearest market was proclaimed as immoral, but the strangest thing was and is, that while no one who follows this precept every day in any street or market of his native town is conscious of any thing but prudence and proper advantage, the immorality was supposed to begin when it was suggested that nations should adopt the kindly and humanizing practices of neighbors.

Is there any plea for protection? Yes, there is one and only one, that I know of. It is one that commands my respect, because it was advanced by Mr. Mill, who said: "The only case in which, on mere principles of political economy, protecting duties can be defensible, is when they are imposed temporarily (especially in a young and rising nation) in hopes of naturalizing a foreign industry in itself perfectly suitable to the circumstances of the country."¹ If I were a citizen of the United States, I should repudiate as an impertinence the suggestion by any outsider that my country was in that position in regard to nearly every conceivable industry. The landmarks of

¹ "Principles of Political Economy." By J. S. Mill. Fifth edition, vol. ii. p. 525.

prosperity in the United States are well settled and defined. The United States carry on a large trade, but they suffer from restrictions upon commerce. The word "commerce" is, indeed, inapplicable to the trade of the United States, for "commerce" in its truest meaning implies the barter of equals without hindrance or restriction. The United States have in twelve years paid off more than \$700,000,000 of debt, and Mr. Gladstone has glorified their conduct; but an American economist has asked, I think with well-founded hesitation, if his country has received value for their repayment? The revenue of the United States appears to me to be raised rather more at the demand and to suit the profits of certain interests, than to supply the needs of the country in the most economic and least burdensome manner. And if that be so, then the vigorous repayment of debt may be rather compulsory—rather a resource for the Treasury than a meritorious sacrifice. I am by no means opposed to the repayment of debt. As the credit of the state is as a rule so very much higher than that of the individuals of which it is the aggregate, the repayment of debt by taxation must as a rule be more burdensome than its endurance. But I am not even on that account unfavorable to repayment. I advocate repayment of debt in all circumstances, because I am certain that it is the best, if not the only, way to prevent increase of indebtedness.

Let us look at the system of protection which isolates the otherwise free community of the United States; which denies to them the communion of commerce; which has rendered the art of living so great, that English tourists for the most part shun the country, and laborers find seeming high wages less valuable than the lower wages of England, where so much is free except the land. It is curious to note how the conditions of the problem are reversed in the two countries. Our gain was to get cheap bread; the people of the United States have a superabundance of breadstuffs; their want is cheap manufactures; we require free land, or "free-trade in land," as Cobden would have said; they have free land practically in illimitable extent. It was a simple proposition in England, that of doubling the size and weight of the penny loaf without increase of price; if it is not so easy to point out the advantage which would result

from free-trade to the American people, it is because food has an urgency which no other requirement of life appears to possess. In England we have, as I have said, persons who are making an outcry against free-trade. They say, "Let us force the United States to concede reciprocity; free import of manufactures for free import of food." They do not scruple to propose that we should reimpose duties upon corn and other food as well as upon raw cotton, until the United States should give way. I am sure that policy would inflict severe injury upon American trade; but I am more sure we should be the greater sufferers. It is notable that the persons who make this suggestion are for the most part directly or indirectly connected with the landed interest. Like all protectionists, they think of themselves first and of the people afterwards.

I see that some American financiers are rejoicing over the "trade balance" of their country. They are delighted because the year 1876-77 shows "the unprecedentedly large excess of \$151,159,288 in the exports of merchandise alone."¹ I have, like many other Englishmen, a considerable stake in the prosperity of the United States, and knowing something of what happened in that year ending 30th June, 1877, I am filled with wonder at finding that an American can discover in it any matter for financial jubilation. Cobden had not to contend with any proposition more blind—I will presume to say more ludicrous—from our landed gentry (of whom Lord Beaconsfield has written in "Lothair," that they live in the open air; they know but one language, and they never read) than this glorification of the American trade-balance of 1876-77. Turning to another page of the same publication, I find that this very year of most glorious "trade-balance" was, as I supposed, the year in which the greatest number of mercantile failures were recorded; the failures in the first six months of 1877 being nearly \$9,000,000 in excess of those recorded in the latter half of that year. But let us carry the lesson as to the trade-balance to the columns from whence it is drawn—those of the imports of manufactures into the United States. The "trade-balance" of 1876-77 is large, not because the domestic exports of the United States have increased, but

¹ "Financial Review" for 1878.

rather because the imports have declined. In 1873-74 the imports of bleached and unbleached cottons amounted in square yards to 26,361,866, and in value to \$3,083,933. In 1876-77 the import of the same goods was less than one half in quantity and value—11,048,698 square yards, and the value, \$1,237,312. Let us take two more items, also of the greatest concern to England—steel and woollen cloths. In 1873-74 the import of steel railroad bars into the United States amounted in lbs. to 292,821,945; in 1876-77 it had fallen to nothingness—to 66,138 lbs., the value having declined from \$9,671,145 to \$1,464. Of “woollen cloths and cassimeres” the United States imported in 1873-74 to the value of \$13,016,460, and in 1876-77 the import was only \$6,624,909. Now if there is any truth in the theory of protection, if this glorification of a “trade-balance” be justifiable, these figures should be reversed. The argument is that the year of shrunken import was the year of prosperity; the unquestionable fact is, that the year of huge imports was the year of prosperity, and that the year of smallest import and of largest “trade-balance” was the twelvemonth of direst adversity and failure in the annals of the United States.

But it remains to be added how deeply, how surely, the impoverishment of the more recent years is due to the restricted conditions under which the great import trade of previous times was, owing to the protective tariffs of the United States, carried on. What was the charge imposed upon the internal carrying-trade and upon the labor and industry of the States by the duties levied upon that import of 1873-74? Let the embarrassment of the railways, let the pauperism of Massachusetts, let the misery of the American iron-workers, give the answer. Have the people of the United States received value in the repayment of a portion of their debt? It had been better for them that their debt had hung in all its dead weight around their necks, and that those of their cotton-mills, their rolling-mills, and their iron ship-building establishments which could not survive free and unrestricted competition had been cast into the sea, than that they should have been persuaded to gain a revenue by refusing to join hands in commerce with the free-traders of the world. It is decreed in the Constitution of the

United States that there should be no taxation of exports ; the time of their most vigorous and assured prosperity will date from the day when free import is the law of that great and noble community.

Every intelligent and unconvinced American who does me the honor to read these pages will seriously ask himself, Is that so ? I must therefore devote myself to establishing more surely that opinion. And first I must say a word upon the moral aspect of the question. I admire beyond my power of expression the loyalty of the American people to the free and enlightened institutions of their country—their ready sacrifices for education ; their united maintenance of order ; their anxiety to uphold the spirit of their Constitution in spite of any personal weakness or failure. But I find it impossible to harmonize these great qualities with the ignorance they display of that yet higher law of civilization and progress which unites nations for the benefit of each and of all in such bonds of freedom and civilization as exist in and among the American people themselves. How they, a nation of traders, permit Congress to determine with whom and under what conditions they shall trade, the regulations being influenced by definite interests, not in any case those of the community, and by secondary considerations of revenue, is hard to understand. I do not say I fail to understand it, because it is made somewhat intelligible to me by observation of the tacit submission with which the British people endure a somewhat similar form of enslavement in regard to the feudalistic tenure of the soil of their island. This submission is a great and culpable weakness in both peoples. I account for it, as to the British, by the fact that hitherto an easy supremacy in manufactures has made the people comparatively indifferent to the tenure of the land, and as to the Americans by the converse fact that hitherto the unbounded increase of their agriculture and their pride in the establishment of a great nation have rendered them blind to economic considerations in the direction of manufactures.

A recent Parliamentary return exhibits the fact that import duties on British goods are higher in the United States than in any of the foreign States of Europe. The following table shows

this in regard to the three commodities to which I have already referred :

	UNITED STATES. Ad val. per ct.	FRANCE. Ad val. per ct.	GERMANY. Ad val. per ct.	RUSSIA. Ad val. per ct.	AUSTRIA. Ad val. per ct.
Iron (bar).....	67 to 100	35	Free	50	35
Cotton Yarns...	53 to 85	Free	4 to 9	23	6 to 9
Woollen " ..	85	"	$\frac{1}{2}$	13	1 to 2

What did the highly-protected cotton-manufacturing industry of the United States accomplish in 1877, that year of greatest disaster and of largest trade-balance? After inflicting upon the whole population an increased cost of cotton goods, greatly in excess of the extra amount of duty by which the entry of British goods is to that extent prohibited, there were exported to Great Britain cotton manufactures to the paltry value of £163,000—the value of the cotton manufactures exported from England in that year being between sixty and seventy millions sterling! Take the case of steel rails, to the heavily-taxed import of which allusion has been made. “The effect has been that the increased cost of relaying a single one of the great trunk roads out of Chicago with steel rails has been in excess of \$2,000,000 more than it would have been had the import of steel rails been free, thereby entailing a tax in perpetuity—reckoning interest at 8%—of \$160,000 per annum on the business of the line, which is mainly the transportation of agricultural products, and requiring the total annual product of over 10,000 acres of the average wheat lands of the West in order to provide the means of its annual payment.” It is not to be wondered at, therefore, that “*Free-trade and farmers’ rights*” is beginning to be the political rallying cry of the great West, and that at a convention in Illinois, representing an association of not less than 100,000 farmers, resolutions were adopted in favor of the repeal of all protective duties on iron, steel, lumber, and materials for the construction of railroads, cars, ships, and agricultural implements, and affirming as a fundamental principle that cheap tools and implements are essential, not only to cheap production, but also to cheap transportation.¹ It would not be possible, I think, to suggest a form of taxation so onerous to the whole country as this heavy charge upon the means and ma-

¹ Speech of Hon. D. A. Wells at Cobden Club Dinner, 1873.

terials of transport and locomotion. In the same address Mr. Wells stated "that the cost of an ordinary passenger railroad car in the United States is directly augmented by reason of tariff taxes on its equipment and material to the extent of from \$1000 to \$1500 ; while in the case of what are known as drawing-room or sleeping-cars the increase of cost is much greater." I watched with interest the "granger" movement in the Western States. So far as that movement was directed to narrow the proper freedom of private enterprise by any undue and improper coercion of the railways with the power of Congress, I was anxious that it should not succeed. Now I believe the farmers of the Western States are forming a more true idea of the root of the evil which weighs so heavily upon their most beneficent industry. If they are united in an energetic policy they can control the legislature of the United States ; they can say, and I believe and hope they will say, that the building materials of their houses and homesteads, the iron and steel of their implements, the roads and wagons by which alone their produce can reach its market, shall not be taxed with such grave injury to the welfare of the United States. The revolt against protection and the victory must be theirs. They need not have a shadow of doubt as to the patriotism of such an endeavor. These odious taxes upon imports which diminish their capital do the largest possible fiscal injury to the whole country, because there is no way in which capital can be employed with so great benefit to all as in agriculture. There can be no question of the truth of Adam Smith's words :¹ "No equal capital puts into motion a greater quantity of productive labor than that of the farmer. No equal quantity of productive labor employed in manufactures can ever occasion so great a reproduction. Of all the ways in which a capital can be employed it is by far the most advantageous to the society."

But the United States' farmers have another interest in this matter, which is also that of the whole population. There may be trade ; there cannot, in the true spirit of the word, be commerce together with protective duties. Commerce is like electricity : it must have a circuit. The producers of the Western States are injuriously affected in reaching their great market, which is England, if by restrictions at the ports of

¹ "Wealth of Nations," Book ii., chap. iv.

America, vessels are prevented from bringing freights as profitable as those with which they return. If British vessels had to go out in ballast to bring back American corn and flour, the profits of the American farmer and miller must be reduced by a proportion of the cost of the outward voyage. Nor is that by any means the whole of their loss. Trade is made by intercommunication of the men of business of each country, and to establish commerce there must be mutual transactions. It is most foolish to rejoice because there is a very large trade-balance between two great countries which border upon the same ocean, which have identity of language and origin, which approximate in population, but which, from the circumstances of their territory, have different wants. For my part I should delight in seeing the trade-balance between my country and the United States appreciable only in cents and pence. Mr. Henry C. Carey, of Philadelphia, a distinguished advocate of high tariffs, has made a hell of his own, which never enters my imagination without a sorrowful and contemptuous shudder, in suggesting the advantage that would result if the ocean that rolls between us were converted into waves of liquid fire. I am now a candidate for the representation in Parliament of that great division of the Manchester District distinguished as the Borough of Salford. There and thereabouts I have thousands of friends who honor the work and revere the memory of Richard Cobden. If ever I visit the United States, nothing would give me so great pleasure as to avenge upon the supposed pecuniary interests of the protectionists of America, by any peaceful power of persuasion I could command in public meeting, those words of Mr. Carey in which he congratulated the United States upon the death of Mr. Cobden, as it spared them from a visit in which his voice would have been powerful with the masses against the interests of protection.

Have the United States secured independence by their anti-free-trade policy? Read the answer on the flags which flutter in their ports. The prosperity of the United States—such as it is—is dependent upon the foreign ship-owner. What a result of “protection to native industry”! Is not the ship-building trade of the United States, with its enormous unseen cost to the people of those States, a failure in their eyes as it is contemptible in ours? Is it not true that “the Pacific Mail Steamship

Company, for example, in order to pay expenses, to say nothing of profits, are obliged to charge a higher fare to passengers, to exact higher rates of freight from shippers, and to demand a larger postal contract from Government, than they could afford to take if by being allowed to supply themselves with ships in the cheapest markets of the world, and of the best quality that competing ship-yards could turn out, they might save one third of their cost and have better steamers?"¹ I offer my sympathy to that New York artist who exclaimed: "This importation of French pictures is ruin to American artists. We must get Congress to raise the tariff on those productions, so that we shall not have to contend with the cheap labor that takes the bread out of our mouths." Why should not Congress protect artists? It would be less injurious to the country than almost any other of their freaks of tariff. Do the iron steamers built on the Delaware under protection, at a heavy cost to the 45,000,000 of American people—do they compete successfully with the ocean-going steamers which the States might obtain from Europe? Do these "protected" and therefore—for it follows—inferior products diminish the condition of dependence to which protection has brought the United States? Is it not a fact that every one of the home-built iron steamers, excepting two or three in the West-India trade, has been constructed for coasting trade or for some line that has been subsidized by the Government of the United States?

Look at the Dominion of Canada! The United States by its tariffs has built a Chinese wall along its vast northern frontier. If I held power in the United States I would make the Canadians ache for continental union—not perhaps necessarily under one government. I would call upon them to invade my country, bringing with them their wool and their barley, their cattle, their produce of all sorts, and carrying back the goods of the United States. Consider the folly of man in erecting barriers against barter! This example of it may be summed up in the following brief statement: "The aggregate value of all the exchanges between the 4,000,000 people of the Dominion of Canada and the 45,000,000 of people in the United States for the year 1875 (the latest year for which we have returns), through every variety of instrumentality, was only \$80,000,000 ;

¹ "Free Ships." By John Codman.

while every 4,400,000 of people on the United States side of the line under the condition of perfect internal free-trade effected exchanges between themselves through the agency of railroads alone to the extent of \$1,000,000,000.”¹ Does not that demonstrate the idiocy of protection? The profit in such a trade as might be done with Canada would vastly exceed the whole value of the trade under existing circumstances. Why have we nearly all the trade, and the United States virtually no trade, with Chili, the most steady and prosperous of the republics of the South? Is it not because Congress, listening to the copper-mining interest, has so taxed the import of Chili’s chief commodity that it passes to free-trading England. The United States manufacturers would like to supply the Chilians with cotton cloth, but if they send a freight of such goods the American vessel must come back empty, because the produce of Chili cannot find a profitable market in the United States when burdened with the heavy import duties. Here again we see an illustration of the truth that commerce is a round game. I have met with another illustration of the economic value of the United States’ prohibitory system in this article of copper. It was told by Mr. Wells—and many an Englishman has had a laugh over it—“The owner of a Dutch vessel, supposing that he would be entering a free country at Boston, had put on board at the port of clearance sufficient copper sheathing to cover the bottom of his vessel, intending, in order to save time, to have the work done in the United States. But he had a rude awakening. He was told that he could not use the new metal without paying a duty of 45 per cent, and further that the metal taken off the ship’s bottom must also pay a duty as old copper. What did he do? He weighed anchor; sailed with his copper for the free British port of Halifax, Nova Scotia; was coppered by Canadian shipwrights, returned in ballast to Boston, and found all this much cheaper than paying the duty: and so American workmen lost employment.

The policy of the United States Government is in this wise: When an article of foreign manufacture—say woollen serge, for example—becomes popular because it is found useful, as woollen serge was for women’s and children’s boots and shoes, some manufacturers whisper to Congress: “We could make

¹ “Why we Trade and How we Trade.” Hon. D. A. Wells.

that stuff if you would help us by raising the price considerably all over the country." And the habit of Congress is to comply, as it did in regard to the "lasting and serge" used for this description of boots and shoes. What is the meaning of this sort of taxation? It means in this case that the Government subsidizes two or three factories in New England with \$1,000,000 annually, and that the purchasers of boots and shoes have to labor gratuitously to pay the subsidy.

In that year of gloom for the United States—a year concerning which folly rejoices in a large "trade-balance"—there was one bright spot in American trade, and it was in commerce with a country to which the United States had virtually conceded free imports. There was prosperity between the United States and Venezuela, because in 1870–72 the United States Government made free the import of coffee and hides, the special commodities of Venezuela. The "trade-balance" of the United States was great in 1876 because the imports from England had fallen so largely since 1870. But the imports from Venezuela in 1876 were nearly treble those of 1870, and the export of United States goods to Venezuela in 1876 showed an increase of 260 per cent upon those of 1870. Is there a trader in America who has the hardihood to tell me that if the business of the United States had been as active with other countries as with Venezuela, the year 1876–77 would have been pre-eminent for mercantile failures? I append a comparison of a few of the exports of the United States to Venezuela in the years 1870 and 1876, the former being under protective tariffs and the latter under a system of comparatively free trade :

	1870.	1876.		1870.	1876.
Beer.....	\$56	\$12,299	Iron, Steel, Cutlery,		
Breadstuffs.....	291,788	788,696	and Guns.....	\$141,043	\$246,281
Candles.....	7,265	28,665	Lamps.....	1,035	7,565
Carriages.....	5,434	45,544	Leather Goods.....	2,075	7,630
Brooms and Brushes	1,824	6,213	Marble and Stone...	800	19,570
Clocks.....	516	3,784	Pianos.....	320	3,236
Cordage.....	20,439	65,846	Mineral Oil.....	21,993	52,008
Cotton Goods.....	11,958	126,950	Paper and Stationery	3,688	37,950
Drugs and Chemicals	23,501	110,825	Provisions.....	119,393	463,280
Earthenware.....	95	2,724	Sewing-machines....	5,993	58,208
Fancy Articles.....	25	5,370	Soap.....	3,844	16,924
Preserved Fruits....	483	7,517			

This increased export was the reward of free-trade. By making coffee free in 1870, and hides free in 1872, the United States enabled Venezuela to increase its import from \$2,037,312 in 1870 to \$5,875,715 in 1876. But that was not all. The shipping interests of the United States, blighted by protective duties, sprang to life between these republics of the North and South. In 1870 "the total American ships engaged in the trade that entered and cleared from and to Venezuela amounted to 15 vessels of 2,571 tons capacity, employing 109 hands. In 1876 the American ships engaged in the same trade amounted to 134 vessels, with a capacity of 43,459 tons and employing 1255 American hands."¹ Here we might end, for abundant proof of the advantages of free-trade is thus given in facts and figures published by the Government of the United States. But let us carry one step further the single matter of the import of hides, and see, with that distinguished free-trader, Mr. Wells, the effect the withdrawal of the import duty upon raw hides had on the export of tanned leather. In 1872, the last year when a duty was levied at the ports of the United States on raw hides, the value of the export of tanned leather was \$2,864,800. In 1876, with free import, the export of tanned leather was valued at \$7,940,000 in a year when gloom and failure were most common in the United States.

The United States will, I am convinced, before long abandon a policy which is unworthy of a great people. We are of course interested in bringing about that change. So great a member of the community of nations cannot hold aloof from free interchange of commodities without the consequences of that isolation being felt throughout the world, and especially by England. But we know for certain that our interest in the matter is inferior to that of the American people. If they please to preserve their tariffs they need not suppose there is the slightest danger that we, on this side, will adopt a suicidal system of retaliation. Free import of American products into England is a great benefit to the United States, but it is a much larger benefit to ourselves, and to tax those imports would be to inflict upon ourselves the pains and penalties of war, with no exception save the bloodshed. Those of us—

¹ "Why we Trade and How we Trade." Hon. D. A. Wells.

and we are legion—whose proudest boast as Englishmen is in the accomplishments of our race in the New World do grieve to see the leading people of that world wasting their riches at the bidding of sordid interests, which have oppressed and are oppressing the splendid energies and the vast resources of the United States. We could understand a desire to establish certain industries under favorable circumstances. But to us it seems rank, unmitigated folly for Americans to suppose that when by protective duties upon almost all commodities the cost of living, and therefore the rate of wages and of interest, has been so augmented, their trades will tend to become strong enough to stand in open competition with the world. And if not, then the only plea for protection is virtually withdrawn. I have a vision of the United States—the country which in my heart stands always nearest to my own—and I hope to see it realized. I will not call a country free which lives within a Chinese wall of hostile tariffs. But in the not distant future I think I see the United States a land of completest liberty, with a people working in free and unrestricted competition with the whole world, sharing and enjoying with us and with all that assurance of peace and plenty which is the product of free and unrestricted trade.

I will enlarge by only a few words upon these three points : (1) Why we desire to see the United States adopt free imports ; (2) Why it is their interest to do so ; and (3) Why we for ourselves are resolute in adherence to the policy of free-trade. We desire, as a matter touching our own interests, that the United States should adopt a system of free imports, because, as Mr. Mill said, " The produce of the whole world would be greater or the labor less than it is if every thing were produced where there is the greatest absolute facility for its production." ¹ When I read the ignorant glorification by Americans of the " trade balance" of that most wretched of their years, 1876-77, I think of the succeeding words of the same great economist : " The vulgar theory deems the advantage of commerce to reside in the exports, as if not what a country obtains but what it parts with, by its foreign trade, was supposed to constitute the gain to it." He has told us in the same chapter why this theory has obtained, and the following words find most direct

¹ " Principles of Political Economy," Book iii., chap. xvii.

application in the United States. It is because "when commerce is spoken of as a source of national wealth the imagination fixes itself upon the large fortunes acquired by merchants, *rather than upon the saving of price to consumers.* . . . Commerce is virtually a mode of cheapening production, and in all such cases the consumer is the person ultimately benefited; the dealer in the end is sure to get his profit whether the buyer obtains much or little for his money." The United States, I may presume, desire to become rich; it is especially our interest that they should be rich, for when our trade languishes it is always because our customers are not prospering. I maintain that we have pursued and are pursuing the best road to national wealth. We are rich, and we shall be richer. Mr. Giffen, chief of the Statistical Department of the Board of Trade, has stated that "the accumulated savings of the ten years ending with 1875 amounted to the prodigious sum of £2,400,000,000, being an average of £240,000,000 per annum."¹ That wealth, I say, sprang from free-trade. I say to the people of the United States, as Sir Robert Peel said on July 6th, 1849, to the people of England, that "I found my opinion on these grounds: The augmentation of capital must depend upon the saving from annual revenue. If you give for certain articles produced at home a greater price than that for which you can purchase those articles from other countries, there is a proportionate diminution of the saving from annual revenue. If you attempt to redress the injustice which would be done by selecting one particular interest for special protection, if you aver that your object is to extend equal protection to all branches of domestic industry, then I reply that the more extensive that system of protection, the greater will be the aggregate loss of annual revenue, the greater will be the check to the augmentation of capital—that is to say, of the means by which labor is to be maintained. So far from encouraging domestic industry, you are in the first place by legislative interference diverting capital from its natural and most profitable application; and you are, in the second place, by giving more for every article than it is worth, exhausting the source from which alone capital can be maintained and augmented."

We have established and domiciled pauperism in England by

¹ "Journal of Statistical Society," March, 1878.

a protective land system, preventing by settlements free-trade in land. The United States is setting up the same curse by a fallacious protection of their internal trade, and the increasing misery of labor in the United States is felt sorely in this country. Where has the commercial distress of the past four years been most deep and lasting? Not in free-trading England, but in protected Germany and the United States. For the conversion of the United States to a more sound commercial policy, I confess that I rely chiefly on the steadfast adherence which will be observed in England to the practice of free-trade. We have no fear concerning the revival of our prosperity. We have great natural advantages which our competitors would be unwise to overlook. These were lately well summarized by Mr. Mundella as follows: "(1) Our cheap and abundant supplies of coal; (2) our excellent geographical position, and (3) our climate, which is so conducive to continuous labor."¹ I think British labor has a superior efficiency, and that this is inalienable, because it is also due to the natural circumstances of the country. An American friend has told me that he finds but one difference between his own country and this. It is, he says, that here he can drink wine with impunity. May not that little fact indicate the possible cause of British tenacity in labor, and also the malady of temptation by which it is so grievously afflicted? There is truth in Mr. Mill's assertion: "The majority of Englishmen have no life but in their work; that alone stands between them and *ennui*."² The time is coming when the workmen of England will be the equals of any in the world in education and in economic training. It is not by any present superiority in that way that their labor is unquestionably more effective. My own observation would lead me to confirm the report of her Majesty's Chief Inspector of Factories, that "the Belgians are an industrious and painstaking race, but, with the French, they lack that intentness of purpose which is the characteristic of the Englishman." That characteristic is, I think, unquestionable, and I ascribe it to the natural circumstances of the country. What folly is that which reads and discerns decadence in a near approaching exhaustion of the natural stores of coal and iron! What con-

¹ "Journal of Statistical Society," March, 1878.

² "Political Economy," vol. i., chap. vii.

fusion to those who rate consumption of coal and iron by arithmetical progression is the vast economy that is coming by the introduction of the electric light and the substitution in machinery, in ship-building, in railways, of steel for iron ! I will presume to say of the American workman that I believe the report of those who represent him as excelling the average British workman in temperance and in education. But he has no exclusive letters-patent for those advantages, and nothing as to England is more certain than that we are becoming a more temperate and a better educated people. That English labor is more productive than the labor of other countries might be shown as clearly by many other figures as by those subjoined, which are taken from a lecture delivered by her Majesty's Chief Inspector of Factories in 1871. Mr. Redgrave, whose knowledge of the textile industry of Europe is unrivalled, gave the following statement of the proportion of spindles to persons employed in the cotton factories of European states :

France.....	14	Belgium.....	50
Russia.....	28	Switzerland.....	55
Prussia.....	37	Smaller States of Germany.....	55
Austria.....	49	United Kingdom.....	74

Mr. Redgrave adds that "in all those occupations in which a call is made upon physical endurance and perseverance the Englishman certainly maintains his pristine eminence." But our reliance is not upon the tenacity and endurance of our people ; it is not upon our firm possession of the shipping trade of the world ; it is not upon our colonies, which impose what tariffs they please against us, more than it is in the successful principle and policy of free-trade. No public man of the slightest eminence in England utters or indorses the nonsense of retaliation. There is no competent British statesman who would not maintain with Sir Robert Peel "*that the best way to compete with hostile tariffs is to encourage free imports.*"

ARTHUR ARNOLD.

THE SUPREMACY OF CONSCIENCE AND OF REVELATION.

RIGHTLY understood, laws inscribed on external nature, written on the heart of man, and revealed in the Word of God must harmonize. They are all from the same infallible Author. However they may differ, so far as they relate to diverse objects, they are at one, and utter one voice when they relate to the same things. Any seeming contrariety must arise from misconceptions of, or false inferences from, one or more of them. There can, therefore, be no real antagonism between the normal conscience or law graven on the heart and that written in the Revealed Word, however greatly the latter may outreach and surpass the former. This, moreover, results from the supremacy of each. The principle that conscience is the regal faculty in man, entitled to rule him, if first duly articulated and emphasized by BUTLER, reinforced by KANT and CHALMERS, was not first recognized by them. Men always acted and reasoned on the assumption of its truth, and were mastered by it though they had not mastered it. But it is no less, if possible it is more, true that the Scriptures, as the unerring Word of God, are the supreme, sufficient, and absolutely binding rule of faith and manners. Conscience, then, is supreme. The Bible is supreme. At their common points of contact, therefore, they must coincide. They cannot contradict each other, even as no truth can contradict any other truth.

But it is constantly and vehemently asserted by persons claiming to have specially deep and broad views of Christian truth, that the conscience, in its categorical imperatives, especially in its most primitive and unsophisticated moral intuitions, goes athwart certain doctrines apparently lying on the very surface of the Scriptures, and incorporated into the symbolic and devotional literature of evangelical, in a high sense of entire,

Christendom. We refer especially to the Fall and Corruption of Man, the Trinity, Incarnation, Redemption through sacrificial Atonement, Spiritual Regeneration, Justification by Faith, Eternal Retributions. Hence it is argued by some that one, by some that another, by others that several or all, of these and affiliated doctrines should be wrenched out of Scripture by some kind of rationalistic special pleading. It becomes necessary, therefore, to inquire whether the supremacy of conscience requires any such torture of Scripture in order to meet its behests. If an alleged conflict arise between the dicta of conscience and the Scriptures, which ought to rule over and rule out the other? On this question we now enter.

For our present purpose it is not necessary to discuss different theories of the nature or genesis of conscience: whether it be, as we consider it, a simple and original faculty of the one indivisible soul; or whether it, with its perceptions and judgments, be ultimately derivatives from other forms of consciousness more primitive, such as the sense of truth, fitness of things, sympathy, the spirit's own excellency, the feeling of pleasure or pain, even in the way of evolutionistic heredity, as set forth by Herbert Spencer and other materialists. However they may say it is derived or originated, they all admit the present supremacy of conscience. Even mechanical evolutionism does not undertake to set it aside. Its great effort is to find a place for conscience and for supersensuous truths of the speculative reason without displacing itself—an effort, in our view, notable chiefly for ingenious devices to achieve the impossible, which come near achieving self-stultification.¹

¹ Herbert Spencer admits "moral intuitions" of imperative authority which he attempts to derive by "heredity" from experiences or sensations of utility felt in some remote ages of the past by our progenitors, which have been transmitted to us through the nerve-modifications they have gradually caused. So they now appear and operate in us, without consciousness of their source or genesis, as moral intuitions or imperatives. He fails to show us, however, in what way the sense of right and obligation can be begotten of the mere sense of pleasure or pain; much more how these can be born of any ultimate force or persistence of force, "alike unknowing and unknown." The fatuity of an attempt to find the "place of conscience in evolution" is made conspicuous in some recent articles on the subject in British reviews, among which we note an excellent paper on "The Ethics of Evolution" in the *British Quarterly Review* for July, 1878; also an article by Rev. T. W. Fowle in the *Nineteenth Century* for that month, followed by a reply to it in the September number. Mr. Fowle explains how *ex nihilo nil fit* in tracing the stages of this genesis. He says, "Conscience is the struggle for existence become aware of itself in the mind of a thinking person." The italics are his. He further speaks of

Precisely, what is meant by the "supremacy of conscience"? This and this only: That it is of right, and ought to be in fact, the regnant faculty of the soul; that whose dictates all other faculties and susceptibilities, volitional, affectional, emotional, and practical, ought to obey. These all may control us in excess: conscience never. The very nature of its behests is, that it is the affirmation of the man to himself, "I ought to do this or that, for it is right; to abstain from this or that, for it is wrong." It is the categorical imperative in the soul, which is to it as the echo of the voice of the supreme Lawgiver: "Do this because it ought to be done, is right in itself, no matter what other considerations may weigh for or against it." It has underneath itself a tacit or conscious reference to God as the Maker, Sovereign, and Judge, who ordains, approves, and will enforce the right. Hence no one can disobey his conscience without sin. This is self-evident. To say otherwise is to say that a man can innocently do what he believes he ought not, or refuse to do what he believes he ought to do. This subverts the very idea of morality and moral obligation. A dilemma may hence arise. For it will soon appear that it is possible for men to bring themselves to believe that to be right which is wrong and *vice versa*, without making it so, or clearing them of guilt in having, or acting upon, such perverse convictions. But we reserve the solution of this until we regularly reach it.

It is implied in all this, that men in the right use of their

"such an epoch, resulting in the origin of conscience, in which a being conscious of himself said, or thought, or felt, "I am," and then, confronted with a world of opposing or destructive forces, said, "I have a right to be." Again: "Morality consists in transferring to other beings like ourselves those rights which we feel that we ourselves possess." How the conviction that we have a *right* to be, or that others have a *right* to be, and the whole delicate and complex framework of morality, come of killing all others in our power in a ferocious struggle for existence, is inconceivable. Yet this author tells us that morality thus derived is "innate," "intuitional" and "imperative." Such a solution runs the whole system into the ground—its birth-place and home. The same ingenious author, in the same periodical for March, 1879, seeks to find "the place of the Will in Evolution" by a like "chemistry of thought" which evolves it in the following order: "I am, I must, I ought, I will," (p. 387). "When man first uttered the words, or rather felt the impression to which subsequently language gave definite shape and force, I '*will* live in spite of all the forces that are compassing my destruction,' then was free-will created upon earth. He was literally *homo contra mundum* [what a light does this aspect of evolution throw upon history?], the parent and precursor of that long line of illustrious martyrs who have witnessed for the inherent freedom of the human spirit." (p. 392.) Such a will indeed is either twin to such a conscience, or its first-born. But the martyrdom begotten of it must be unique.

faculties may know their duty, and cannot without fault be in ignorance or error about it. That men do fall into great and fatal errors respecting their duty, is proven by the simple fact of the vast disagreements among them about it. Some of them must be in the wrong, although, as we may yet see, less in fundamental moral insight than in its concrete applications. This must then arise, if they are accountable for these aberrations, or the misdeeds to which they prompt, from the criminal neglect or refusal to look at the light and evidence at their command. So reason affirms, and it is the inspired solution as well. "The wrath of God is revealed from heaven against all ungodliness and unrighteousness of men, who hold the truth in unrighteousness; because that which may be known of God is manifest in them; for God hath showed it unto them. For the invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and Godhead; so that they are without excuse" (Rom. 1 : 18-20). This surely asserts such abundance of objective and subjective light, even by nature, in regard to the true character and service of God, that all ignorance of and error about them, on the part of the heathen, are inexcusable, because due to wilful negligence and refusal fairly to note and estimate the evidence thus arrayed before them. This solution of the case is more explicitly given in other parts of this tremendous portraiture and in other portions of the Bible. It is charged that "they did not like to retain God in their knowledge" (ver. 28), that "when they knew God, they glorified Him not as God, neither were thankful; but became vain in their imaginations, and their foolish heart was darkened" (ver. 21). They "changed the glory of the uncorruptible God into an image made like to corruptible man, and to birds, and four-footed beasts, and creeping things" (ver. 23). "Who changed the truth of God into a lie, and worshipped and served the creature more than the Creator, who is blessed forever" (ver. 25). It is thus past all question that heathen blindness to the truths of natural religion even, is due to an inexcusable shutting out or turning from the light. This at once arises from and thickens the films of prejudice against, or the vail of enmity to the truth disclosed by such light. So the heart becomes at once "foolish" and "darkened," the imaginations vain. Professing themselves to be wise, they become fools. In aid or aggravation of

this comes that divine judicial abandonment to the lusts they cherish, and the delusions which feed them, in virtue of which God no longer arrests their downward course by His restraining providence and grace. This is thrice asserted in this appalling sketch, in accordance with other Scriptural averments: "Wherefore God also gave them up to uncleanness through the lusts of their own hearts" (ver. 24). "For this cause God gave them up unto vile affections" (ver. 26). "God gave them over to a reprobate mind" (ver. 28). This is in exact accord with the more precise enunciation elsewhere of the effect of first repelling light and espousing error, the love of unrighteousness begetting the "deceivableness of unrighteousness," and thus provoking judicial abandonment, to it on the part of God: "With all deceivableness of unrighteousness in them that perish; because they received not the love of the truth, that they might be saved. And for this cause God shall send them strong delusion, that they should believe a lie: that they all might be damned who believed not the truth, but had pleasure in unrighteousness" (2 Thess. 2: 10, 11, 12).

This liability of the conscience to swerve from the standard of rectitude which it is its normal office, as the Supreme Guiding Faculty of the soul, to uphold and enjoin, is manifoldly set forth in other Scriptures, as they declare of some that "even their mind and conscience is defiled" (Tit. 1: 15); and speak of those "having their conscience seared with a hot iron" (1 Tim. 4: 2), of "an evil conscience" (Heb. 10: 22), a "weak conscience" (1 Cor. 8: 12), in contrast to the "pure" and "good conscience," so often elsewhere mentioned. While it is undoubtedly true that in these phrases reference is sometimes more prominently had to living in a manner approved or condemned by conscience, or the cleansing away of conscious guilt by atoning blood, it is no less certain that reference is equally had to the error or truth of the moral judgments. The case of Paul before conversion, who "verily thought that he ought to do many things contrary to the name of Jesus of Nazareth;" Christ's prayer for His crucifiers, "Father, forgive them, for they know not what they do;" His forewarning His apostles of bloody persecutors who would think themselves "doing God service" by killing His servants and ministers—are conclusive on this point.

Moreover, the Bible is explicit and strenuous in denouncing

such false moral judgments, including the disbelief of its own revelations and requirements to which they lead, as culpable and justly obnoxious to grave condemnation and punishment. It denounces "woe unto them that call evil good, and good evil; that put darkness for light, and light for darkness" (Isaiah 5 : 20). The inexorable alternative of the Gospel propounded by its divine Author is "He that believeth shall be saved; but he that believeth not shall be damned" (Mark 16 : 16). This implies the sufficiency of the evidence of its truth, and the inexcusableness of the unbelief which is blind to it. But the truth and the whole rationale of it on this subject are clearly set forth by our Saviour as follows: "He that believeth on Him is not condemned: but he that believeth not is condemned already, because he hath not believed in the name of the only-begotten Son of God. And this is the condemnation, that light is come into the world, and men loved darkness rather than light, because their deeds were evil. For every one that doeth evil hateth the light, neither cometh to the light, lest his deeds should be reproved. But he that doeth truth cometh to the light, that his deeds may be made manifest, that they are wrought in God" (John 3 : 18-21).

So this moral blindness to the evidence, excellency, and glory of the truth, as incarnated in, taught and enjoined by, Him who is the Way, the Truth, and the Life, is due to the fact that the unbeliever or rejecter of this truth loves darkness rather than light, because his deeds are evil. So he is unwilling to let in the light of truth upon them to make manifest their evilness. "For whatsoever doth make manifest is light." So he will not come "to the light, lest his deeds should be reproved." This is practically the guilty secret, and philosophically the *ultima ratio* of the reality and the responsible guiltiness of this blindness and bewilderment of conscience, in respect to truths and duties which shine in ample light of self-evidence or other evidence. It will not attend to this evidence, or come to this light.

This being so, it goes far to establish a presumption in regard to the competency of the natural conscience in man's present abnormal state to set up its judgments as the measure of what the infallible God may teach as true, or in bar of the accepted church interpretations of the teachings of the Bible as impossible to be true, because in alleged contradiction to the

moral intuitions of the human soul. It must not be forgotten, moreover, that the aberrations and abominations sanctioned by the heathen, through voluntary blindness to the light which shines upon them, are largely dissipated in Christendom through the supernatural light of Revelation. The higher moral tone, and purer moral standards which Christianity has imperceptibly diffused through Christian nations are often proudly recognized and avowed even by those who repudiate the Bible. They are indebted to the Bible for this higher "light of nature," which they would fain pervert, so as to discredit Christianity. The natural conscience as it exists in Christendom, even in those who think to employ it to break down revelation or the doctrines of revelation, as being counter to its dictates, owes its whole superiority in moral insight above the heathens, and its assumed authority to sit in judgment upon the Bible, or to rule out its distinctive teachings, to the illuminating and corrective power of those teachings. The light of nature in Christendom, in a word, is that light partially cleared of the mists with which heathen perversion has beclouded it, by the influence of the Bible. Yet it is not fully cleared for those who in any degree avert their eyes from this divine effulgence, or who consciously or unconsciously seek to deflect and remove it. Thus shining "in darkness, the darkness comprehendeth it not;" seeing they do not see, and hearing they do not understand. Although they cannot utterly exclude or extinguish this light, still they may so hate it as to refuse to open themselves to its fulness; yea, make it even the source of a bewilderment and confusion in many aspects equivalent to darkness. "If therefore the light that is in thee be darkness, how great is that darkness! (Matt. 6: 23). How then does it appear that the conscience of men, not as it might and ought to be, but in its actual state, is so infallible as to be incapable of enlightenment; and thus qualified to sit in judgment over the Word of God, as an authority paramount to the latter—the ultimate standard and test of what God may or may not reveal? If the eye were single indeed, the whole body would be full of light. So if the conscience were single-eyed, the whole man would be fully enlightened.

But the question arises, whether a misguided conscience justifies acts morally wrong, which the doer sincerely thinks right; or whether the intention with which an act is done

alone has moral character and good or ill-desert, irrespective of the nature of the act done. It must be confessed that these questions cannot be satisfactorily answered by a categorical yes or no. If we take an act intrinsically bad, like fraud, cruelty, blasphemy, persecution, no good intention or conviction that it is morally right can make it so. Paul's persecution of Christians was not right nor innocent, even if he "verily thought" it so. This is the dread dilemma already noted, to which an utterly misguided and misguiding conscience brings its subjects. We cannot disobey its dictates without sin: we cannot innocently commit the sin it prompts or sanctions. "To him that esteemeth any thing to be unclean, to him it is unclean" (Rom. 14: 14). But the true solution of this case goes deeper, to the underlying causes of the false moral judgment. These are culpable, even as it is culpable. As we have seen, they involve a faulty neglect of, or turning from, the light that would have prevented its aberrations. A good intention of "doing evil that good may come" is a misnomer. It is emphatically condemned by the Bible and all unperturbed consciences. We can never give place to the maxim that "the end justifies the means," if those means be immoral. No man can innocently "call evil good and good evil." What can justify one in thinking theft or murder right, Christianity an imposture, or the persecution of Christians "doing God service"? Were the crucifiers of Christ excusable for not knowing what they did? for their blindness to what convinced the disciples, the converted thief, the astonished centurion, the faithful women, and Joseph of Arimathea—that Christ was indeed the Son of God, and the purest of men?

Yet it is evident that ignorance, though culpable, mitigates the guilt of the sin it cannot excuse. This is the intuitive judgment of men. It is implied in that prayer of Divine benignty on the cross already quoted; in Paul's declaration that he was "before a blasphemer, and a persecutor, and injurious; but I obtained mercy, because I did it ignorantly in unbelief" (1 Tim. 1: 13).

Moreover, there is this truth in the principle that the moral character of actions depends upon the good or evil intentions which prompt them: That acts in themselves morally indifferent acquire moral character wholly from the good or evil intention with which they are done. In respect to acts of this

kind, "unto the pure all things are pure" (Tit. 1 : 15). While no bad intention can be right, even though it prompt to acts that would be good if done with a good intention ; and no good intention, even if one perfectly such were possible in the case, can justify acts in their own nature morally evil, still, within these limitations, the morality of an action depends upon the intent of the actor. In short, in order to fulfil the moral law, an act must be both materially and formally good—good in itself and its motive. For the law prescribes both conditions.

This brings to the front the question, how far conscience is infallible, and incapable of education. That it is so, is asserted by that high authority, Professor CALDERWOOD, after KANT, as follows, in his "Handbook of Moral Philosophy," p. 8: "Conscience is a faculty which from its very nature cannot be educated. Education either in the sense of instruction or training is impossible. As well propose to teach the eye how and what to see, and the ear how and what to hear, as to teach Reason how to perceive the self-evident and what truths are of this nature. All these have been provided for in the human constitution." He quotes Kant's declaration, "an erring conscience is a chimera" ("Met. of Ethics," iv., 12). In an appendix to after editions prepared in part for the purpose of obviating criticisms upon this deliverance, he says: "There is no part of this textbook which has more uniformly met with adverse criticism from those who give a general assent to its theory, than the position that conscience cannot be educated." He contends that if "we labor to enlighten and instruct our conscience, we regard it as deficient in guiding power and authority. If so, it is impossible to speak of the supremacy of our conscience. Butler's most important position is lost. . . . That conscience intuitively recognizes the moral law ; that it is supreme in its authority ; and that it cannot be educated—are three propositions which hang or fall together" (pp. 271-2).

The familiar phrases "practised ear" and "trained eye," imply a capacity for education in these organs which renders them poor illustrations and proofs of the non-educability of conscience. If our limits do not permit us to go further in that complete refutation of this Kantian position of which it is susceptible, it is the less necessary, as Professor Calderwood concedes "there is undoubtedly a measure of truth underlying the pop-

ular declaration that conscience needs to be educated" (p. 271). This is unquestionable, although the contrary appears to be argued by the author from the intuitional character of the faculty. It is such so far as discerning the nature and first principles of morality is concerned ; but in deductions from these first principles, and the application of them to concrete cases for our guidance, it is discursive. Besides, it is no small part of education to settle what are and what are not intuitive maxims in any science—for while all men are mastered by, few have mastered them—and much more to determine what, by right reasoning, can be deduced from them. All mathematics start from a few axioms intuitively known, but nevertheless adequately known only to the fewest without that education which has brought them and the proper statement of them to the mind of the learner. But then is not the mathematical faculty indefinitely capable of education? And may not men by "use have their senses exercised to discern both good and evil"?

So the moral faculty is capable of education—simply and purely as a faculty, like any other, by instruction and training, irrespective of the need arising from its defilement and error, through the perversion of sin already set forth ; then especially in consequence of its bewilderment through sin ; and still further as the truths made known through supernatural revelation vastly amplify the range of duties discoverable by the mere natural conscience and reason ; or as Christianity creates duties unknown to natural religion.

Nor does this capacity for or need of education undermine the supremacy of conscience as the guiding faculty of the soul. In order to be competent for this function, it is not requisite that it be incapable of error, if perverted ; but capable of being a right guide of life, if unperverted. It is not necessary that it be qualified for the office without availing itself of all the light and helps within reach ; but that it be capable by the due use of its powers, first of discerning the lights and aids natural and supernatural within reach for its adequate illumination,* and then of using them aright, "not walking in craftiness, nor handling the Word of God deceitfully." To assume that, in order to the rightful supremacy of conscience, it should be impossible for it, if wrongly used, to err, is as absurd as to say that we ought not to be guided by our understanding, because, through perversion or neglect, it may come to erroneous conclusions ;

through wilful inattention to the truth and evidence it may leave us ignorant of the snares and pitfalls before us. The misuse of the understanding is no excuse for not rightly using it and following its lead, at least to the light stronger than its own, where this is insufficient. We are not to be "as the horse, or as the mule, which have no understanding," even if "the way of the wicked is as darkness" and "they know not at what they stumble." It is not the prerogative of the conscience more than of the whole understanding, although both alike in their due place are set for the guidance and rule of the soul, to possess a self-sufficing light, further than as they can discern and open themselves to the light that may come from all quarters for their guidance. The eye is not sufficient of itself without the light which makes manifest the objects it beholds, or without the proper beholding on different sides of the objects so manifested. So of the inward eye of Conscience and Reason. In God's light it sees light.

Here we find the clue to the perfect consistency of the Supremacy of Conscience with the Supremacy of Scripture. In a sound, normal state conscience acting as our supreme inward director commands us to submit ourselves to the guidance of God's Word, and make that the supreme rule for the guidance of the whole man, itself included. So the supremacy of conscience in its sphere leads, and commands its own submission to the supremacy of the Bible, the moment it is seen, in the light of its internal or external evidences, or both combined, to be the Word of God, given by His inspiration and stamped with His infallibility. Into the proofs of that inspiration and infallibility we cannot now enter. We must for the present assume them—and that this inspiration has secured the utterance of the mind of God, "not in the words which man's wisdom teacheth, but which the Holy Ghost teacheth," in a manner compatible with all the individualities of style of the several human writers, while it bears to every candid mind the impress of divinity, and is recognized as the utterance of One speaking as never man spake. Now, when once convinced by this internal evidence of divinity confirmed by miracle and prophecy, the conscience enthrones the Bible in and over itself as the Word of God, it perfects instead of impairing its own supremacy, in the supremacy of the Bible. This is prolific of important consequences.

1. Conscience must assume the truth of this revelation, and its perfection as a rule of faith and practice, "The law of the Lord is perfect." "All scripture is given by inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness: that the man of God may be perfect, thoroughly furnished unto all good works" (2 Tim. 3 : 16, 17). This covers the whole ground. They are "able to make wise unto salvation." Now suppose the conscience, the moral or even speculative reason, finds what seems to jar with its antecedent judgments? What is the presumption? That it is wrong, or the oracles of God are wrong? Or if it be sure of its own accuracy, that it may or may not have misconceived that representation of Scripture to which it demurs? And is it not better even with sightless eyes to be led by the hand of the All-seeing, than to grope and stumble in its own darkness?

2. It is withal to be observed, that, if the matters revealed be above the plane of the light of nature, or beyond the horizon of natural reason, such as the Trinity, Incarnation, Redemption, Regeneration, Atonement, and Justification, natural reason or conscience cannot adjudicate upon or against them, unless they offer some indubitable contradiction of intuitive first principles. In this case the presumption is of some misconception, of the supposed Scriptural utterance, or of the intuition supposed to be arrayed against it. Of revelations in the sphere of natural reason and conscience which seem to conflict with them, we have seen how all this may be accounted for by perversions of them arising from dislike and inattention to the truth. The presumption here then is, until the contrary appears, that the alleged contradiction comes, not of error in the Bible, but the aberrations or defilement of our own consciences. Of revelations of truths above nature this is still more emphatically true.

3. And this all the more, as when once the mind acknowledges the Divinity of the Scriptures through whatever proof, and deals with them accordingly, it is quick to discern beauties, concinnities, harmonies, outshinings of the glory of God in the face of Jesus Christ, and in the heavens which also declare it, all blending in the heightened effulgence of the one God of nature and revelation, which were hidden from it before. Thus a holy wisdom illumines the soul, scatters mists and errors, solves apparent paradoxes and contradictions, or rele-

gates them to the sphere, not of contradictions, but of insoluble mystery, where it is the "glory of God to conceal a thing." So also the Scriptures claim to speak: even "the wisdom of God in a mystery," "the hidden wisdom," "which none of the princes of this world knew: for had they known it they would not have crucified the Lord of glory" (1 Cor. 2:7, 8). The very knowledge that the Bible is from God wonderfully facilitates and quickens the appreciation of its truth, beauty, and divinity, as a whole, in its parts, and their harmony with each other and with right reason. CHALMERS very felicitously avails himself, in illustration of this point, of the observation of Sir JOSHUA REYNOLDS, that once we know certain paintings were by the great masters, such as Titian, Raphael, Michael Angelo, we proceed with promptness and decision to mark their beauties, which we might have been much longer in detecting, had we not the impulse and support of such a predisposition to discern them. So is it with the Word of God. When once recognized and treated as such, its divine beauties stand out to our gaze, and are quickly taken in by the eye, so that the difficulties that have perplexed, and the mists that have bewildered us, are scattered by the rising beams of the Sun of Righteousness.

4. Thus, even if we meet in the Bible with revelations or requirements of God which we cannot at once reconcile with our moral standards, or ideas of goodness, conscience will assume that it is consistent with absolute righteousness and goodness, and would appear so to all right-minded persons, if it could be brought in all its aspects and relations to our view as it is to the Infinite Mind. A typical instance of this is the command to Abraham to offer up Isaac, obedience to which is declared in the New Testament to have been an eminent act of faith (Heb. 11:17-19).

The reason and conscience when confronted with insoluble cases will take into account that, in a large sense, they cannot be the measure and standard of what is possible with God; for two reasons: 1. Their finitude. How shall the finite span the Infinite or know more than "parts of His ways"? 2. Their perversion, as already shown, resulting in a comparative blindness to many sides of moral and religious truth, too often so long persisted in as to become indurated into the bondage of habit. Remembering this, the candid inquiring spirit will be

slow to conclude that the apparent teachings of the Word of God, which have commanded the faith and moulded the life of the best peoples of the earth, are, rightly understood, incompatible with the dictates of unperverted conscience and reason.

It is said, "We never can give up first truths : we can't use our reason to find out essential truths, and then hold that our reason is not to be trusted." Indeed we never can give up first truths. But we may well cease to summon against the Word of God spurious claimants of that dignity and authority which represent only strong personal or partisan convictions, or distortions and misapplication of such truths. Of this more to come. The proposition "We can't use our reason to find out essential truths, and then hold that our reason is not to be trusted," if true in one sense, is not true in every sense. Reason may find evidence of a divine revelation of truths entirely above its own plane and comprehension—its own moral standard even—which it can never discover, master, or judge of by its own insight. It simply finds them affirmed by the testimony of God. If He affirms them, that is enough, whether it can understand all about them or not, nay—though it does not as yet see how they can fail to contradict some indubitable intuition of sense or reason. In this case, neither the intuition nor the divine testimony is to be questioned, but our own interpretation or application of one or the other of them. May not reason be employed to find evidences of revelation, and what it teaches, without being "trusted," in a higher range for which a divine chart has been given? Is it indeed so that reason is to be trusted to determine that God cannot, without denying Himself, reveal the Trinity, Incarnation, Regeneration, Justification, Eternal Retribution? As well say that because the naked eye may be trusted to guide the helm down the Hudson, or through Long Island Sound to the Atlantic, without chart or compass, it can be trusted without them through the trackless ocean ; or that it can be trusted to determine the *à priori* possibility of the magnificent revelations of the telescoping and microscopy of modern science ; or that after such revelations it can even read the phenomena within its own proper horizon as before—that the meaning even of the rising or setting sun will remain unaltered. Even so faith, reinforcing reason, and trusting the testimony of God, is "the evidence of things not seen," *i.e.*, not discoverable by any native power of

sense or reason. "Religion passes out of the ken of reason only when the eye of reason has reached its own horizon, and faith is then but its continuation. Even as the day softens into the sweet twilight, and twilight, hushed and breathless, steals into the darkness" (Conclusion of "Biographia Literaria," by S. T. Coleridge).

And the truths of the Gospel in its purity positively commend themselves to the conscience purified of its perversities. They cannot go athwart any unperturbed conscience. So the apostle declares: "Not walking in craftiness, nor handling the Word of God deceitfully; but by manifestation of the truth commending ourselves to every man's conscience in the sight of God" (2 Cor. 4: 2).

We are now face to face with the whole scope of the *judicium contradictionis* which natural conscience or reason possesses as a warrant for denying that certain doctrines can come from a perfect God, or can be contained in any revelation of His will. In determining its scope, it is a safe attitude to strive rather to lift our reason up to God's Word, than to bring that down to our reason: to take the yoke and learn of the great Teacher, remembering that in a large sphere "the wisdom of this world is foolishness with God" (1 Cor. 3: 19). Nothing is to be accepted as the Word of God which contradicts any other unquestionable truth of sense, reason, or conscience. So the bread and wine of the sacrament are figuratively, they cannot be literally, the body and blood of Christ. So two cannot be four, nor the same subject three and one at the same time and in the same sense—an objection sometimes falsely made against the doctrine of the Trinity. So nothing can be from God which denies the axioms or demonstrated truths of mathematics. So that could not be a revelation from God which commands, sanctions, or promotes irreligion or immorality, lying, treachery, cruelty, profanity, blasphemy—although the character of the Bible in this respect is to be estimated rather by its plain indubitable tenor and influence, than by some exceptional unsolved cases. So what clearly contradicts our indubitable moral intuitions, as that we should do justly, love mercy, and walk humbly with our God, cannot be recognized as from Him. So far reason keeps within its true province, not vaulting into rationalism.

But we have seen how widely men under the blinding in-

fluence of passion or prejudice may misstate or misapply their own moral intuitions, or how they may elevate to the rank of intuitive truths their own strong prepossessions, or the tenets of party, sect, or tradition, which they have been wont to count sacred. Those who have given competent attention to this subject have therefore seen the importance of finding criteria to distinguish such intuitive truths, moral and otherwise, from unwarrantable pretenders to this dignity. *Unaquæque gens hoc legem naturæ putat quod didicit.* We have not far to seek for the main test, which is the universality of their acceptance—not, indeed, in the avowed profession or acknowledgment of them, but in the real, even if unconscious, submission to their regulative force in thought and action. Men thus recognize their truth in the concrete, even if they dispute or are ignorant of them as abstract, formulated propositions. Let the fatalist deny free-agency, or the reality of moral distinctions, he will nevertheless show his belief of them when himself injured or maligned. Let one deny causality, he will show that he believes it in reference to the next event he observes. So whoever may deny or blind himself in any way or degree to these moral intuitions or their proper import, nevertheless feels their undertone in his soul, which constantly tends to make itself heard in reasserting them and compelling their recognition. The law of God “written in their hearts” may be defied, blurred, or distorted in the soul’s manner of dealing with it. Nevertheless it will assert itself among those who, given “over to a reprobate mind,” in the commission of all heathen abominations, yet, underneath all, know the judgment of God “that they which commit such things are worthy of death.” “Which shew the work of the law written in their hearts; their conscience also bearing witness, and their thoughts the meanwhile accusing or else excusing one another” (Rom. 2 : 15).

Indeed, however these intuitions may be smothered, or kept in abeyance, so making room for those conflicting moral judgments which have so wide a prevalence among men, yet it has been noted by moral philosophers that this disagreement pertains more to the use or abuse, the application or misapplications, or fallacious reasonings from, the first principles of morals, than to the principles themselves. Or it is more in the region of positive than moral laws; in reference to some aspect of ac-

tions *per se* indifferent, than to what is intrinsically good or evil ; more in respect to moral judgments founded on varying representations of the intellect in different persons regarding the act approved or condemned, or the aim and intent of the doer, than in respect to the moral character itself of such aim and intent when these are seen by different consciences to be identical. The famous case of Caius Toranius, adduced by Paley to prove that there is no original moral faculty, no intrinsic moral good or evil in actions, because no uniformity of moral judgment among men ("Mor. Phi.," i. : 5), rightly viewed, proves just the contrary. The wild boy of Hanover, with faculties all undeveloped, brought forward by Paley to act as judge of the moral character of the act, is no more to the purpose than an infant. But let the case be submitted to men of developed minds the world over, and there might be differences of opinion as to the moral character of this betrayal, from varying representations of the motives which prompted it : not otherwise. If it were understood that Caius Toranius did it to further his own interest by aiding the murder of his father, scarcely any man who had not dehumanized himself would fail to brand him as the worst of parricides. But if he did it feeling that he was called upon to make the dreadful sacrifice to save his country, it might look more like Abraham's offering up his only son Isaac at the command of God. "And thus the identical acts which in one nation are the subjects of a most reverent and religious observance, may in another be regarded with a shuddering sense of abomination and horror. And this not because of any difference in what may be termed the moral categories of the two people, nor because, if moral principles in their unmixed generality were offered to the contemplation of either, either would call evil good or good evil. When theft was publicly honored and rewarded in Sparta, it was not because theft in itself was reckoned a good thing ; but because patriotism and dexterity, and those services by which the interests of patriotism might be supported, were reckoned to be good things" (Chalmers, "Nat. Theology," B. ii. 20).

The "deceitfulness of sin" is spoken of in Scripture as one of its unquestioned attributes. It invents specious pretexts to veil its own deformity and ill-desert. It has ever done this from the primal sin in paradise to the last murder and even peccadillo.

That "with names of virtue it deceives," and "has a thousand treacherous arts to practise on the mind," is the utterance of childhood hymns which articulate the experience of the race. The historian thus reflects upon the hideous atrocities of the Jacobins in the darkest crisis of the French Revolution. "Even the blood which they shed was often the result, in their estimation, not so much of terror or danger as of overbearing necessity; they deemed it essential to the success of freedom. . . . They massacred others because they were conscious that death, if vanquished, justly awaited themselves; but still the weakness of humanity in their, as in many similar cases, deluded them by the magic of words, or the supposed influence of purer motives, and led them to commit the greatest crimes while constantly professing the purest intentions" (Alison's "History of Modern Europe," chap. 14; see also Cicero's "Republic," iii. 22-33).

As we come more directly to apply the foregoing considerations to the Christian doctrines against which the authority of conscience is so often claimed to be arrayed, it is worth while to keep in mind, even at the cost of a little repetition, that the conscience or light of nature thus arrayed against Christian doctrine has acquired whatever fitness it possesses for this purpose from the Bible itself. Is it then *à priori* probable that the very doctrines which have thus elevated and purified the conscience of Christendom can incur the condemnation of that conscience exercised aright upon them? These have made Christendom, and moulded its life and manners. They have given the conscience of the Christian nations whatever superiority to the heathen conscience it possesses. Are we to suppose that this conscience, thus receiving its enlightenment from the power of Christian truth, in the main as accepted by evangelical Christians, should, fairly employed, reject and condemn those doctrines as contrary to its own intuitions, or other right moral judgments? If we cannot hesitate as to the proper answer to this question in regard to Christianity as a whole, neither, can we in regard to the substance of particular catholic doctrines most controverted, as contrary to the ethical or other intuitions of the race.

We have before named some of the doctrines most impugned, as contrary to these moral intuitions, or other princi-

ples of acknowledged authority among men. They are confessedly taught by Scripture in its *prima facie* import, both express and by implication with the analogy of faith. They have been inwrought into the faith and life of the Christian Church. It is futile, therefore, to say that in their true meaning they are contradictory to any genuine intuitions of the human soul. Such alleged intuitions are destitute of the criterion of universality. They are not recognized by the large majority of the excellent of the earth, who believe, love, and live the propositions they are said to contradict. And further, many of the doctrines they are claimed so to contradict evince their truth, by their regulative and controlling power over those who speculatively dispute them. Here we are happy to refer our readers to the excellent article by Principal KILLEN, with which the January number of this Review for the present year begins, entitled "The Conscience as a Witness for Christ." Its chief object is to set forth the positive attestation by the conscience of the truth as it is in Jesus. Of course, truths which the conscience thus recognizes and affirms, it cannot, in any legitimate use of it, be employed to wipe away by a *judicium contradictionis*. Referring our readers to that article, we shall very briefly give a more specific application of the principle we have been contending for—that our moral intuitions do *not* contradict Scriptural and evangelical doctrines.

We need not again refer to the Trinity. The Incarnation is confessedly a mystery. "Great is the mystery of godliness; God was manifest in the flesh." But it involves no more contradiction of moral or other axioms than the union of soul and body.

The attempt to impugn the doctrine of the Fall of all men in and through the Fall of their first progenitor, as being contrary to our moral intuitions, fails at the very outset, because the actual fall and degradation of the race from its normal standard, indeed from its own standards of rectitude, are attested by all fact and history. That it should have been consequent on the fall of the Head of the race, as set forth in Scripture, is only a broader exemplification of that way of Divine Providence whereby it constantly occurs, that the represented suffer for the acts of their representatives, nations for the sins of their rulers, and children for the iniquities of their parents through successive generations.

Rationalizing and latitudinarian religionists constantly strive to hurl the moral intuitions against the Redemption system, in respect to its supernatural provisions or methods of salvation. It is said that the propitiatory or vicarious character of the Atonement, whereby the sufferings of the just are substituted for those of the unjust, "involves the loss or confusion of all moral distinctions," makes the cross the "central gallows of the universe," is "the simplest form of absurdity," and much more the like. This has no plausibility with respect to any thing but some caricature of the doctrine, which makes the adorable victim an involuntary one, or his death an offering to Satan, or some matter of commercial exchange and balancing. So gratuitous justification is arraigned as destroying incentives to holiness. The moral intuitions of men, so far from revolting against these doctrines, find in them the only adequate foundations of peace to the soul and supports to holiness, because the only satisfaction of their own demands. The attempt to make expiation for sin by sacrifice is as old and as broad as the race. It has been misdirected indeed, till men, finding that one offering of blood divine, which "hath perfected forever them that are sanctified, "being justified by faith, have peace with God through our Lord Jesus Christ" (Rom. 5 : 1).

A similar process is often attempted against the Divine method of removing not only the curse and penalty, but the bondage and pollution of sin ; viz. : Spiritual regeneration, with its correlate of human corruption dependent upon it for removal. All moral and speculative objections to this dependence on Divine grace, this helplessness which is at the same time sin and guilt, find their solution in actual Christian experience ; in the cries, "I believe ; Lord, help thou mine unbelief ;" "when I am weak, then am I strong" (2 Cor. 12 : 10) ; "I will run the way of Thy commandments, when Thou shalt enlarge my heart" (Ps. 119 : 32).

We conclude, passing over much else not alien from our present argument, with a reference to the doctrine of Eternal Punishment, which has of late been much assailed, as contravening the moral judgments and intuitions of the race. This first suggested and may properly conclude this article.

Whatever may be true of the sympathetic feelings which recoil from the bare thought of the everlasting, or even tempo-

rary, misery of any sensitive being considered solely *per se*, or of its being a proper recompense for sins which to us seem trivial because their "exceeding sinfulness" is unfelt by us, there is no reasonable question (1) that it is so expressly, manifoldly, directly, and by implication set forth on *the very surface* of the Scriptures, as to require the most adroit and toilsome special pleading to develop any contrary meaning from them; (2) that it has thus been, with small exceptions, the accepted doctrine of Christendom, including the choicest portions of mankind; (3) that this is conclusive proof that it cannot contradict any moral intuition of our race rightly interpreted and applied, nor any right moral judgment of any kind, since it has been and is so largely accepted by the purest and most enlightened of mankind. Still further, the apostle declares that those living in the depths of heathen pollution, and who have blinded themselves to the enormity of their abominations, nevertheless have an underlying intuition of the vastness of their ill-desert, which he sets forth in words to which we have twice adverted (Rom. 1 : 32). Death, declared to be the wages (earnings) of sin, we know is abundantly used in Scripture for the privation of good and incurring of evil, not only definite, but indefinite in degree and duration. It means that "destruction and perdition" from which we have no hint of any escape or deliverance for time or eternity, except by the salvation of Christ, which, alone is the power of God unto salvation, and whenever or wherever bestowed is not of merit, but of grace.

We know and feel the force of the appeal to our sensibilities when it is asked, "Can a God of Infinite Benevolence consign any of His creatures, for the sins of a day, or of the few and evil, evil yet few, years of our mortal life, to endless despair?" But, first, how do we know all the immeasurable conditions and possibilities that ought to influence the Infinite and Perfect One in the government of the moral universe? Are there not stupendous crimes which even we feel should consign the doer to sudden destruction, and that without remedy? And how do we know but that all sin, even any sin, is to Him who is of purer eyes than to behold iniquity an "abomination which His soul hateth" beyond all human indignation at the most monstrous crimes? And, secondly, if this reasoning were valid, it has a wider logical sweep than

most who use it count upon. If, so far as the mere benevolence of God is concerned, we cannot see how it consists with it to suffer any of His creatures to remain miserable in the future and eternal state, how is it consistent therewith that they should suffer the terrible woes, the anguish and desolation, which, however relieved while probation yet lasts by the good things of this life, yet spread a pall over human history—in the individual, from the birth-throe to the death-pang; in society, by war, carnage, devastation, plague, famine, tempest, tornado, drunkenness, every form of physical anguish and moral degradation? These things, and more which the pen falters in attempting to describe, give a woe-begone aspect to this sin-smitten earth, of which the unceasing funeral processions upon it are the constant emblem and culmination, relieved only by faith in Him who by death conquered death. They occur under the administration of a God of Infinite Benevolence, whose Providence permits and allots them. This benevolence, therefore, is not inconsistent with the infliction of terrible anguish and desolation. An argument from it against the infliction of dreadful woes for sin, dreadful whether from intensity or duration, is an argument which proves too much. If good for Universalism, Restorationism, or Annihilationism, it is good for a great deal more. It is good for infidelity, nay, for Atheism itself. For if there be a God, He is not a God who fails to distribute sorrows in His anger, even though His nature be love, and punishment His strange work.

Moreover, it will scarcely be pretended that a man under the dominion of sin, of hardness of heart, of alienation from and enmity to God, can be happy. "He satisfieth the longing soul" made to enjoy Him forever, and to be wretched when severed from Him by sin, even though its evanescent pleasures beget a transient insensibility to this misery. After all, "the carnal mind is enmity against God," and "to be carnally minded *is* DEATH" while "to be spiritually minded *is* LIFE and PEACE." Sin unrepented of, unexpiated, and unforgiven, not merely brings death: it is death—the blight and ruin of a rational being. We need not suppose nor need we deny any outward positive infliction. Let men continue eternally wicked and they are eternally miserable, for "there is no peace, saith my God, to the wicked." Heaven itself, if the supposition of

their presence in it were endurable, could not make the obdurately wicked happy. The evil conscience still remains, and its remorse is all that is necessary to constitute the deathless worm and the quenchless flame. This the apostate angels too well know, as they "believe and tremble." The sting of death is sin.

Consequently, the soul carries the elements of woe in itself wherever and so long as it carries its impenitence, whatever mitigations of its anguish may now come from the favors mingled with its present state of probation, in which mercy tempers judgment and keeps off despair. But what evidence or hint have we that the impenitence, from which no accents of redeeming love could woo the stubborn and infatuated soul in a world of opportunity, will yield in that sphere of darkness which no ray of hope illumines, where, so far as we are informed, the very offers and ordinances of redemption are forever unknown? What shall prevent that "he that is unjust, shall be unjust still: he that is filthy, shall be filthy still: he that is righteous, shall be righteous still: he that is holy, shall be holy still"? (Rev. 22:11.) If any doctrine is taught in the Word of God, it is, as we have seen, that God in this life often withdraws the purifying and restraining influences of his grace from the obdurate, and judicially abandons them to self-imposed infatuation and blindness, in retribution for their obduracy.

Quem Deus vult perdere prius dementat, is a maxim recognized alike by heathen and Christian peoples. "Ephraim is joined to his idols: let him alone" (Hos. 4:17), is typical of God's way with those who offend His majesty, trifle with His forbearance, and contemn His grace. God indeed delights to pardon the believing penitent, and mercy rejoices against judgment. But where has He promised to pardon the stubbornly impenitent? Or where has He "promised penitence on sin," whether in this life, or the life to come? Where has He promised pardon for the unpardonable sin which "hath never forgiveness"? Making the utmost of the "love which passeth knowledge," what is in store, and storing up, for those who continue to abuse or despise it? Is this to bridge the great gulf fixed between the lost and the saved in the future state? Will not rather the self-intensifying obduracy which braces itself against redeeming love, and so accumulates increasing treasures

of wrath here, propel itself in undiminished momentum through the ages to come? "These shall go away into everlasting punishment: but the righteous into life eternal" (Matt. 25 : 46). "We are sure that the judgment of God is according to truth against them which commit such things. And thinkest thou this, O man, that judgest them which do such things, and doest the same, that thou shalt escape the judgment of God? Or despisest thou the riches of His goodness, forbearance, and long-suffering; not knowing that the goodness of God leadeth to repentance? but, after thy hardness and impenitent heart, treasurest up unto thyself wrath against the day of wrath and revelation of the righteous judgment of God; who will render to every man according to his deeds?" (Rom. 2 : 2-6.)

We will add a word in regard to the effort now making to eliminate the doctrine of eternal retribution from the place it has held in the faith of that group of Protestant communions hitherto known as evangelical, known also by their earnest, aggressive, revival, missionary spirit—their zeal for holy living and the propagation of the Gospel. We can only testify our conviction, in the absence of room for argument, that thus to eliminate is to emasculate. The logic which leads to it is bound to take further strides. Its first practical tendency will be to minimize the sense of the evil of sin by minimizing the conception of its ill-desert and punishment. This attenuating process will go on till it narrows the whole scope and importance of salvation to the measure of the perdition from which it saves. We forecast no further. We fear that the attempt to broaden the church by dropping out this article, which energizes the entire truth as it is in Jesus, will be to increase its extension at the cost of its intensive life and force, if it do not cause new divisions and sects. This enervating tendency is not disproved by some notable cases of doubters or rejecters of this doctrine eminent for purity of life, pulpit power, and pastoral fidelity. The bodies of people who have long rejected it are known by their fruits. As a whole, less wrought upon by the terrors, they are less constrained by the love of God in Christ. Each of these illustrates the other. In both are found the blended elements of Infinite Excellence. "Behold therefore the goodness and severity of God" (Rom. 11 : 22).

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